

Drawn from Nature by A. Wilson

1. Ring-tail Eagle.

2. Sea Eagle.

Engraved by J. G. Harwood

AMERICAN ORNITHOLOGY;

OR,

THE NATURAL HISTORY

OF THE

BIRDS OF THE UNITED STATES.

ILLUSTRATED WITH PLATES

Engraved and Colored from Original Drawings taken from Nature.

BY ALEXANDER WILSON.

VOL. VII.

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PREFACE.

WE now enter upon the second grand division of our subject, WATER BIRDS; and on that particular class, or order, usually denominated *Grallæ*, or Waders. Here a new assemblage of scenery, altogether different from the former, presents itself for our contemplation. Instead of rambling through the leafy labyrinths of umbrageous groves, fragrance-breathing orchards, fields and forests, we must now descend into the watery morass, and mosquito-swamp; traverse the windings of the river, the rocky cliffs, bays and inlets of the sea-beat shore, listening to the wild and melancholy screams of a far different multitude; a multitude less intimate indeed with man, tho not less useful; as they contribute liberally to his amusement, to the abundance of his table, the warmth of his bed, and the comforts of his repose.

In contemplating the various, singular and striking peculiarities of these, we shall every where find traces of an infinitely wise and beneficent Creator. In every deviation of their parts from the common conformation of such as are designed for the land alone, we may discover a wisdom of design never erring never failing in the means it provides for the accomplishment of its purpose. Instead therefore of imitating the wild presumption, or rather pro-

fanity, of those who have censured as rude, defective or deformed, whatever, in those and other organized beings, accorded not with their narrow conceptions; let it be ours to search with humility into the *intention* of those particular conformations; and thus, entering as it were into the designs of the Deity, we shall see in every part of the work of his hands abundant cause to exclaim with the rapturous poet of nature,

“O Wisdom infinite! Goodness immense!
And Love that passeth knowledge!”

In the present volume, the greater part of such of the Waders as belong to the territories of the United States, will be found delineated and described. This class naturally forms an intermediate link between the Land Birds and the Web-footed, partaking, in their form, food and habits, of the characters of both; and equally deserving of our regard and admiration. Tho formed for traversing watery situations, often in company with the Swimmers, they differ from these last in one circumstance common to Land Birds, the separation of the toes nearly to their origin; and in the habit of never venturing beyond their depth. On the other hand, they are furnished with legs of extraordinary length, bare for a considerable space above the knees, by the assistance of which they are enabled to walk about in the water in pursuit of their prey, where the others are obliged to swim; and also with necks of corresponding length, by means of which they can search the bottom for food, where the others must have recourse to diving.

The bills of one family (the Herons) are strong, sharp pointed, and of considerable length; while the flexibility of the neck, the rapidity of its action, and remarkable acuteness of sight, wonderfully fit them for watching, striking and securing their prey. Those whose food consists of more feeble and sluggish insects, that lie concealed deeper in the mud, are provided with bills of still greater extension, the rounded extremity of which possesses such nice sensibility, as to enable its possessor to detect its prey the instant it comes in contact with it, tho altogether beyond the reach of sight.

Other families of this same order, formed for traversing the sandy sea beach in search of small shell fish that lurk just below the surface, have the bills and legs necessarily shorter; but their necessities requiring them to be continually on the verge of the flowing or retreating wave, the activity of their motions forms a striking contrast with the patient habits of the Heron tribe, who sometimes stand fixed and motionless, for hours together, by the margin of the pool or stream, watching to surprize their scaly prey.

Some few again, whose favorite food lies at the soft oozy bottoms of shallow pools, have the bill so extremely slender and delicate, as to be altogether unfit for penetrating either the muddy shores, or sandy sea beach; tho excellently adapted for its own particular range, where lie the various kinds of food destined for their subsistence. Of this kind are the *Avosets* of the present volume, who not only wade with great activity in considerably deep water; but having the feet nearly half webbed, combine in one the characters of both wader and swimmer.

It is thus, that by studying the living manners of the different tribes in their native retreats, we not only reconcile the singularity of some parts of their conformation with divine wisdom; but are enabled to comprehend the reason of many others, which the pride of certain closet naturalists has arraigned as lame, defective and deformed.

One observation more may be added: the migrations of this class of birds are more generally known and acknowledged than that of most others. Their comparatively large size and immense multitudes, render their regular periods of migration (so strenuously denied to some others) notorious along the whole extent of our sea coast. Associating, feeding and travelling together in such prodigious and noisy numbers, it would be no less difficult to conceal their arrival, passage and departure, than that of a vast army through a thickly peopled country. Constituting also, as many of them do, an ~~article~~ *article* of food and interest ~~to man~~, he naturally becomes more intimately acquainted with their habits and retreats, than with those feeble and minute kinds, which offer no such inducement, and perform their migrations with more silence, in scattered parties, unheeded or overlooked. Hence many of the Waders can be traced from their summer abodes, the desolate regions of Greenland and Spitzbergen, to the fens and sea shores of the West India islands and South America, the usual places of their winter retreat, while those of the Purple Martin and common Swallow still remain, *in vulgar belief*, wrapt up in all the darkness of mystery.

The figures in the plates which accompany this volume have been generally reduced to one half the dimensions of the living

birds. In the succeeding volumes where some of the subjects measure upwards of five feet in height, one general standard of reduction will be used, by which means the comparative size of each species can be easily ascertained at first glance; and a greater number introduced in each plate, so as to comprehend the whole of our ornithology in Nine volumes; being one less than originally projected.

ALEXANDER WILSON.

Philadelphia, March 1st, 1813.

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AMERICAN ORNITHOLOGY.

RING-TAIL EAGLE.

FALCO FULVUS.

[Plate LV.—Fig. 1.]

LINN. *Syst.* 125—*Black Eagle*, *Arct. Zool.* p. 195, No. 87.—LATH. I, 32, No. 6.—*White-tailed Eagle*,
EDW. I, 1.—*L'Aigle Commun*, BUFF. I, 86. *Pl. Enl.* 409.—BEWICK, I, p. 49.—TURT. *Syst.* p. 145.
PEALE'S *Museum*, No. 84.

THE reader is now presented with a portrait of this celebrated Eagle, drawn from a fine specimen shot in the county of Montgomery, Pennsylvania. The figure here given, tho reduced to one-third the size of life, is strongly characteristic of its original. With respect to the habits of the species, such particulars only shall be selected as are well authenticated, rejecting whatever seems vague or savours too much of the marvellous.

This noble bird, in strength, spirit and activity, ranks among the first of its tribe. It is found, tho sparingly dispersed, over the whole temperate and arctic regions, particularly the latter; breeding on high precipitous rocks; always preferring a mountainous country. In its general appearance it has great resemblance to the Golden Eagle, from which, however, it differs in being rather less; as also in the colors and markings of the tail; and, as it is said, in being less noisy. When young, the color of the body is considerably lighter, but deepens into a blackish brown as it advances in age.

The tail feathers of this bird are highly valued by the various tribes of American Indians for ornamenting their calumets, or Pipes of Peace. Several of these pipes which were brought from the remote regions of Louisiana by captain Lewis, are now deposited in Mr. Peale's Museum, each of which has a number of the tail feathers of this bird attached to it. The Northern as well as Southern Indians seem to follow the like practice, as appears by the numerous calumets, formerly belonging to different tribes, to be seen in the same magnificent collection.

Mr. Pennant informs us, that the independent Tartars train this Eagle for the chase of hares, foxes, wolves, antelopes, &c. and that they esteem the feathers of the tail the best for pluming their arrows. The Ring-tail Eagle is characterized by all as a generous spirited and docile bird; and various extraordinary incidents are related of it by different writers, not, however, sufficiently authenticated to deserve repetition. The truth is, the solitary habits of the Eagle now before us, the vast inaccessible cliffs to which it usually retires, united with the scarcity of the species in those regions inhabited by man, all combine to render a particular knowledge of its manners very difficult to be obtained. The author has, once or twice, observed this bird sailing along the alpine declivities of the White mountains of New Hampshire, early in October, and again, over the Highlands of Hudson's river, not far from West Point. Its flight was easy, in high circuitous sweeps, its broad white tail, tipped with brown, expanded like a fan. Near the settlements on Hudson's Bay it is more common, and is said to prey on hares, and the various species of Grouse which abound there. Buffon observes, that tho other Eagles also prey upon hares, this species is a more fatal enemy to those timid animals, which are the constant object of their search, and the prey which they prefer. The Latins, after Pliny, termed the Eagle *Valeria quasi valens viribus*, because of its strength, which appears greater than that of the other Eagles in proportion to its size.

The Ring-tail Eagle measures nearly three feet in length; the bill is of a brownish horn color; the cere, sides of the mouth and feet yellow; iris of the eye reddish hazel, the eye turned considerably forwards; eyebrow remarkably prominent, projecting over the eye, and giving a peculiar sternness to the aspect of the bird; the crown is flat; the plumage of the head, throat and neck long and pointed; that on the upper part of the head and neck very pale ferruginous; fore part of the crown black; all the pointed feathers are shafted with black; whole upper parts dark blackish brown; wings black; tail rounded, long, of a white or pale cream color, minutely sprinkled with specks of ash and dusky, and ending in a broad band of deep dark brown of nearly one-third its length; chin, cheeks and throat black; whole lower parts a deep dark brown, except the vent and inside of the thighs, which are white stained with brown; legs thickly covered to the feet with brownish white down or feathers; claws black, very large, sharp and formidable, the hind one full two inches long.

The Ring-tail Eagle is found in Russia, Switzerland, Germany, France, Scotland, and the northern parts of America. As Marco Polo, in his description of the customs of the Tartars, seems to allude to this species, it may be said to inhabit the whole circuit of the arctic regions of the globe. The Golden Eagle, on the contrary, is said to be found only in the more warm and temperate countries of the ancient continent.* Later discoveries, however, have ascertained it to be also an inhabitant of the United States.

* BUFFON, vol. i, p. 56, Trans.

SEA EAGLE.

FALCO OSSIFRAGUS.

[Plate LV.—Fig. 2.]

Arct. Zool. p. 194, No. 86.—LINN. *Syst.* 124.—LATH. I, 30.—*L'Orfraie*, BUFF. I, 112, pl. 3. *Pl. Enl.* 12, 415.—*Br. Zool.* I, No. 44.—BEWICK, I, 53.—TURT. *Syst.* p. 144.—PEALE'S *Museum*, No. 80.

THIS Eagle inhabits the same countries, frequents the same situations, and lives on the same kind of food as the Bald Eagle, with whom it is often seen in company. It resembles this last so much in figure, size, form of the bill, legs and claws, and is so often seen associating with it, both along the Atlantic coast and in the vicinity of our lakes and large rivers, that I have strong suspicions, notwithstanding ancient and very respectable authorities to the contrary, of its being the same species, only in a different stage of color.

That several years elapse before the young of the Bald Eagle receive the white head, neck and tail; and that during the intermediate period their plumage strongly resembles that of the Sea Eagle, I am satisfied from my own observation on three several birds kept by persons of this city. One of these belonging to the late Mr. Enslen, collector of natural subjects for the emperor of Austria, was confidently believed by him to be the Black, or Sea Eagle, until the fourth year, when the plumage on the head, tail and tail coverts began gradually to become white; the bill also exchanged its dusky hue for that of yellow; and before its death, this bird, which I frequently examined, assumed the perfect dress of the full plumaged Bald Eagle. Another circumstance corroborating these suspicions, is the variety that occurs in the colors of the Sea Eagle. Scarcely two of these are found to be alike, their plumage being

more or less diluted with white. In some the chin, breast and tail-coverts are of a deep brown; in others nearly white; and in all evidently unfixed and varying to a pure white. Their place and manner of building, on high trees, in the neighbourhood of lakes, large rivers, or the ocean, exactly similar to the Bald Eagle, also strengthens the belief. At the celebrated cataract of Niagara great numbers of these birds, called there Grey Eagles, are continually seen sailing high and majestically over the watery tumult, in company with the Bald Eagles, eagerly watching for the mangled carcasses of those animals that have been hurried over the precipice, and cast up on the rocks below, by the violence of the rapids. These are some of the circumstances on which my suspicions of the identity of those two birds are founded. In some future part of the work I hope to be able to speak with more certainty on this subject.

Were we disposed, after the manner of some, to substitute for plain matters of fact all the narratives, conjectures, and fanciful theories of travellers, voyagers, compilers, &c. relative to the history of the Eagle, the volumes of these writers, from Aristotle down to his admirer the Count de Buffon, would furnish abundant materials for this purpose. But the author of the present work feels no ambition to excite surprise and astonishment at the expense of truth, or to attempt to elevate and embellish his subject beyond the plain realities of nature. On this account, he cannot assent to the assertion, however eloquently made, in the celebrated parallel drawn by the French naturalist between the Lion and the Eagle, *viz.* that the Eagle, like the Lion, “disdains the possession of that property which is not the fruit of his own industry, and rejects with contempt the prey which is not procured by his own exertions;” since the very reverse of this is the case in the conduct of the Bald and the Sea Eagle, who, during the summer months, are the constant robbers and plunderers of the Osprey or Fish-Hawk, by whose industry alone both are usually fed. Nor that “*though*

famished for want of prey, he disdains to feed on carrion," since we have ourselves seen the Bald Eagle, while seated on the dead carcase of a horse, keep a whole flock of Vultures at a respectful distance, until he had fully sated his own appetite. The Count has also taken great pains to expose the ridiculous opinion of Pliny, who conceived that the Ospreys formed no separate race, and that they proceeded from the intermixture of different species of Eagles, the young of which were not Ospreys, only Sea Eagles; *which Sea Eagles, says he, breed small Vultures, which engender great Vultures that have not the power of propagation.** But, while labouring to confute these absurdities, the Count himself, in his belief of an occasional intercourse between the Osprey and the Sea Eagle, contradicts all actual observation, and one of the most common and fixed laws of nature; for it may be safely asserted that there is no habit more universal among the feathered race, in their natural state, than that chastity of attachment, which confines the amours of individuals to those of their own species only. That perversion of nature produced by domestication is nothing to the purpose. In no instance have I ever observed the slightest appearance of a contrary conduct. Even in those birds which never build a nest for themselves, nor hatch their young, nor even pair, but live in a state of general concubinage; such as the Cuckoo of the old and the Cow Bunting of the new continent; there is no instance of a deviation from this striking habit. I cannot therefore avoid considering the opinion above alluded to that "the male Osprey by coupling with the female Sea Eagle produces Sea Eagles; and that the female Osprey by pairing with the male Sea Eagle gives birth to Ospreys"† or Fish-Hawks, as altogether unsupported by facts and contradicted by the constant and universal habits of the whole feathered race in their state of nature.

The Sea Eagle is said by Salerne to build on the loftiest oaks a very broad nest, into which it drops two large eggs, that are

* Hist. Nat. lib. x, c. 3.

† BUFFON, vol. I, p. 80. Trans.

quite round, exceedingly heavy, and of a dirty white color. Of the precise time of building we have no account, but something may be deduced from the following circumstance. In the month of May, while on a shooting excursion along the sea coast, not far from Great Egg Harbour, accompanied by my friend Mr. Ord, we were conducted about a mile into the woods to see an Eagle's nest. On approaching within a short distance of the place, the bird was perceived slowly retreating from the nest, which we found occupied the center of the top of a very large yellow pine. The woods were cut down and cleared off for several rods around the spot, which from this circumstance and the stately erect trunk and large crooked wriggling branches of the tree, surmounted by a black mass of sticks and brush, had a very singular and picturesque effect. Our conductor had brought an axe with him to cut down the tree; but my companion, anxious to save the eggs, or young, insisted on ascending to the nest, which he fearlessly performed, while we stationed ourselves below, ready to defend him in case of an attack from the old Eagles. No opposition, however, was offered; and on reaching the nest, it was found, to our disappointment, empty. It was built of large sticks, some of them several feet in length; within which lay sods of earth, sedge, grass, dry reeds, &c. &c. piled to the height of five or six feet, by more than four in breadth; it was well lined with fresh pine tops, and had little or no concavity. Under this lining lay the recent exuviae of the young of the present year, such as scales of the quill feathers, down, &c. Our guide had passed this place late in February, at which time both male and female were making a great noise about the nest; and from what we afterwards learnt, it is highly probable it contained young, even at that early time of the season.

A few miles from this is another Eagle's nest, built also on a pine tree, which, from the information received from the proprietor of the woods, had been long the residence of this family of

Eagles. The tree on which the nest was originally built had been for time immemorial, or at least ever since he remembered, inhabited by these Eagles. Some of his sons cut down this tree to procure the young, which were two in number; and the Eagles soon after commenced building another nest on the very next adjoining tree, thus exhibiting a very particular attachment to the spot. The Eagles, he says, make it a kind of *home* and *lodging place* in all seasons. This man asserts, that the Grey, or Sea Eagles, are the young of the Bald Eagle, and that they are several years old before they begin to breed. It does not drive its young from the nest like the Osprey, or Fish-Hawk; but continues to feed them long after they leave it.

The bird from which the figure in the plate was drawn, and which is reduced to one-third the size of life, measured three feet in length, and upwards of seven feet in extent. The bill was formed exactly like that of the Bald Eagle, but of a dusky brown color; cere and legs bright yellow; the latter, as in the Bald Eagle, feathered a little below the knee; irides a bright straw color; head above, neck and back streaked with light brown, deep brown and white, the plumage being white, tipt and centered with brown; scapulars brown; lesser wing-coverts very pale, intermixed with white; primaries black, their shafts brownish white; rump pale brownish white; tail rounded, somewhat longer than the wings when shut, brown on the exterior vanes, the inner ones white, sprinkled with dirty brown; throat, breast and belly white, dashed and streaked with different tints of brown and pale yellow; vent brown, tipt with white; femorals dark brown, tipt with lighter; auriculars brown, forming a bar from below the eye backwards; plumage of the neck long, narrow and pointed, as is usual with Eagles, and of a brownish color tipt with white.

The Sea Eagle is said by various authors to hunt at night as well as during the day, and that besides fish it feeds on chickens, birds, hares and other animals. It is also said to catch fish during

the night; and that the noise of its plunging into the water is heard at a great distance. But in the descriptions of these writers this bird has been so frequently confounded with the Osprey, as to leave little doubt that the habits and manners of the one have been often attributed to both; and others added that are common to neither.

ESQUIMAUX CURLEW.

SCOLOPAX BOREALIS.

[Plate LVI.—Fig. 1.]

Arct. Zool. p. 461, No. 364.—LATH. III.—TURT. Syst. p. 392.—PEALE'S Museum, No. 4003.

IN prosecuting our researches among the feathered tribes of this extensive country, we are at length led to the shores of the ocean, where a numerous and varied multitude, subsisting on the gleanings of that vast watery magazine of nature, invite our attention; and from their singularities and numbers, promise both amusement and instruction. These we shall, as usual, introduce in the order we chance to meet with them in their native haunts. Individuals of various tribes, thus promiscuously grouped together, the peculiarities of each will appear more conspicuous and striking, and the detail of their histories less formal as well as more interesting.

The Esquimaux Curlew, or as it is called by our gunners on the sea-coast, the Short-billed Curlew, is peculiar to the new continent. Mr. Pennant, indeed, conceives it to be a mere variety of the English Whimbrel (*S. Phæopus*); but among the great numbers of these birds which I have myself shot and examined, I have never yet met with one corresponding to the descriptions given of the *Whimbrel*, the colors and markings being different, the bill much more bent, and nearly an inch and a half longer; and the manners in certain particulars very different: these reasons have determined its claim to that of an independent species.

The Short-billed Curlew arrives in large flocks on the sea-coast of New Jersey early in May from the south, frequent the salt marshes, muddy shores and inlets, feeding on small worms

Engraved from plates by J. H. Johnson

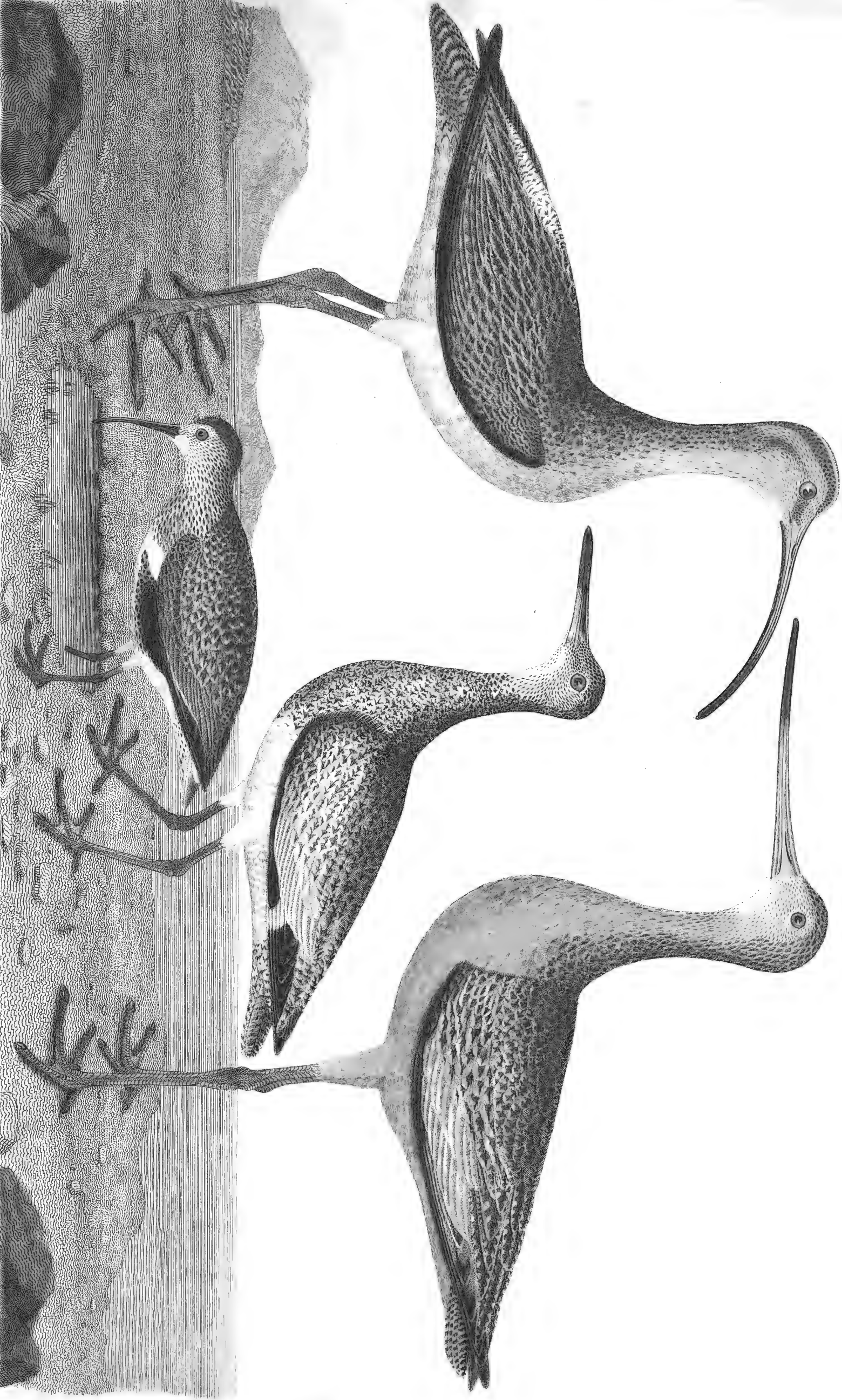
1. *Equusmanus Carteri*

2. *Red-backed Snipe*

3. *Semipalmated S.*

4. *Marbled Godwit*

Engraved by J. H. Johnson



and minute shell fish. They are most commonly seen on mud flats at low water, in company with various other waders; and at high water roam along the marshes. They fly high and with great rapidity. A few are seen in June and as late as the beginning of July, when they generally move off towards the north. Their appearance on these occasions is very interesting: they collect together from the marshes as if by premeditated design, rise to a great height in the air, usually about an hour before sunset, and forming in one vast line, keep up a constant whistling on their march to the north, as if conversing with one another to render the journey more agreeable. Their flight is then more slow and regular, that the feeblest may keep up with the line of march, while the glittering of their beautifully speckled wings sparkling in the sun produces altogether a very pleasing spectacle.

In the month of June, while the dew-berries are ripe, these birds sometimes frequent the fields in company with the Long-billed Curlews, where brambles abound, soon get very fat, and are at that time excellent eating. Those who wish to shoot them, fix up a shelter of brushwood in the middle of the field, and by that means kill great numbers. In the early part of spring, and indeed during the whole time that they frequent the marshes, feeding on shell fish, they are much less esteemed for the table.

Pennant informs us, that they were seen in flocks innumerable on the hills about Chatteux bay, on the Labrador coast, from August the ninth to September sixth, when they all disappeared, being on their way from their northern breeding place.—He adds “they kept on the open grounds, fed on the *empetrum nigrum*, and were very fat and delicious.” They arrive at Hudson’s Bay in April, or early in May; pair and breed to the north of Albany fort among the woods, return in August to the marshes, and all disappear in September.* About this time they return in

* Phil. Trans. LXII, 441.

accumulated numbers to the shores of New Jersey, whence they finally depart for the south early in November.

The Esquimaux Curlew is eighteen inches long, and thirty-two inches in extent; the bill, which is four inches and a half long, is black towards the point, and a pale purplish flesh color near the base; upper part of the head dark brown, divided by a narrow stripe of brownish white; over each eye extends a broad line of pale drab; iris dark colored; hind part of the neck streaked with dark brown, fore part and whole breast very pale brown; upper part of the body pale drab, centered and barred with dark brown and edged with spots of white on the exterior vanes; three first primaries black, with white shafts; rump and tail coverts barred with dark brown; belly white; vent the same, marked with zig-zag lines of brown; whole lining of the wing beautifully barred with brown on a dark cream ground; legs and naked thighs a pale lead color.

The figure of this bird and of all the rest on the same plate are reduced to exactly one-half the size of life.

RED-BACKED SANDPIPER.

TRINGA ALPINA.

[Plate LVI.—Fig. 2.]

Arct. Zool. p. 476, No. 391.—BEWICK, II, p. 113.—*La Brunnette*, BUFF. VII, 493.—PEALE'S *Museum*, No. 4094.

THIS bird inhabits both the old and new continents, being known in England by the name of the Dunlin; and in the United States, along the shores of New Jersey, by that of the Red-back. Its residence here is but transient, chiefly in April and May, while passing to the arctic regions to breed; and in September and October when on its return southward to winter quarters. During their stay they seldom collect in separate flocks by themselves; but mix with various other species of strand birds, among whom they are rendered conspicuous by the red color of the upper part of their plumage. They frequent the muddy flats and shores of the salt marshes at low water, feeding on small worms and other insects which generally abound in such places. In the month of May they are extremely fat.

This bird is said to inhabit Greenland, Iceland, Scandinavia, the Alps of Siberia; and in its migrations the coasts of the Caspian sea.* It has not, till now, been recognized by naturalists as inhabiting this part of North America. Wherever its breeding place may be, it probably begins to lay at a late period of the season, as in numbers of females which I examined on the first of June, the eggs were no larger than grains of mustard seed.

Length of the Red-back eight inches and a half, extent fifteen inches; bill black, longer than the head, (which would seem to

* Pennant.

rank it with the Snipes) slightly bent, grooved on the upper mandible, and wrinkled at the base; crown, back and scapulars bright reddish rust, spotted with black; wing coverts pale olive; quills darker; the first tipt, the latter crossed with white; front, cheeks, hind head and sides of the neck quite round, also the breast, greyish white, marked with small specks of black; belly white, marked with a broad crescent of black; tail pale olive, the two middle feathers centered with black; legs and feet ashy black; toes divided to their origin, and bordered with a slightly scalloped membrane; irides very dark.

The males and females are nearly alike in one respect, both differing greatly in color even at the same season, probably owing to difference of age; some being of a much brighter red than others, and the plumage dotted with white. In the month of September, many are found destitute of the black crescent on the belly; these have been conjectured to be young birds.

SEMI-PALMATED SNIPE.

SCOLOPAX SEMI-PALMATA.

[Plate LVI.—Fig. 3.]

Arct. Zool. p. 469, No. 380.—PEALE'S *Museum*, No. 3942.

THIS is one of the most noisy and noted birds that inhabit our salt marshes in summer. Its common name is the *Willet*, by which appellation it is universally known along the shores of New York, New Jersey, Delaware and Maryland, in all of which places it breeds in great numbers.

The Willet is peculiar to America. It arrives from the south on the shores of the middle states about the twentieth of April, or beginning of May; and from that time to the last of July its loud and shrill reiterations of *Pill-will-willet*, *Pill-will-willet*, resounds, almost incessantly, along the marshes; and may be distinctly heard at the distance of more than half a mile. About the twentieth of May the Willets generally begin to lay.* Their nests are built on the ground, among the grass of the salt marshes, pretty well towards the land, or cultivated fields, and are composed of wet rushes and coarse grass, forming a slight hollow or cavity in a tussock. This nest is gradually increased during the period of laying and sitting, to the height of five or six inches. The eggs are usually four in number, very thick at the great end, and tapering to a narrower point at the other than those of the common hen; they measure two inches and one-eighth in length, by one and a half in their greatest breadth, and are of a dark dingy olive, largely blotched with blackish brown, particularly at the great end. In

* From some unknown cause, the height of laying of these birds is said to be full two weeks later than it was twenty years ago.

some the ground color has a tinge of green; in others of blueish. They are excellent eating, as I have often experienced when obliged to dine on them in my hunting excursions through the salt marshes. The young are covered with a grey-colored down; run off soon after they leave the shell; and are led and assisted in their search of food by the mother; while the male keeps a continual watch around for their safety.

The anxiety and affection manifested by these birds for their eggs and young, are truly interesting. A person no sooner enters the marshes than he is beset by the Willets, flying around and skimming over his head, vociferating with great violence their common cry of *Pill-will-willet*; and uttering at times a loud clicking note, as he approaches nearer to their nest. As they occasionally alight and slowly shut their long white wings speckled with black, they have a mournful note, expressive of great tenderness. During the term of incubation, the female often resorts to the sea shore, where, standing up to the belly in water, she washes and dresses her plumage, seeming to enjoy great satisfaction from these frequent immersions. She is also at other times seen to wade more in the water than most of her tribe; and when wounded in the wing will take to the water without hesitation, and swims tolerably well.

The eggs of the Willet, in every instance which has come under my observation, are placed during incubation in an almost upright position, with the large end uppermost; and this appears to be the constant practice of several other species of birds that breed in these marshes. During the laying season the Crows are seen roaming over the marshes in search of eggs, and wherever they come spread consternation and alarm among the Willets, who in united numbers attack and pursue them with loud clamours. It is worthy of remark, that among the various birds that breed in these marshes, a mutual respect is paid to each other's eggs; and it is only from intruders from the land side, such as

Crows, Jays, weasels, foxes, minx and man himself, that these affectionate tribes have most to dread.

The Willet subsists chiefly on small shell fish, marine worms and other aquatic insects; in search of which it regularly resorts to the muddy shores and flats at low water; its general rendezvous being the marshes.

This bird has a summer and also a winter dress, its colors differing so much in these seasons as scarcely to appear to be the same species. Our figure in the plate exhibits it in its spring and summer plumage, which in a good specimen is as follows.

Length fifteen inches, extent thirty inches; upper parts dark olive brown; the feathers streaked down the center and crossed with waving lines of black; wing-coverts light olive ash; and the whole upper parts sprinkled with touches of dull yellowish white; primaries black, white at the root half; secondaries white, bordered with brown; rump dark brown; tail rounded, twelve feathers, pale olive waved with bars of black; tail coverts white barred with olive; bill pale lead color, becoming black towards the tip; eye very black; chin white; breast beautifully mottled with transverse spots of olive on a cream ground; belly and vent white, the last barred with olive; legs and feet pale lead color; toes half webbed.

Towards the Fall, when these birds associate in large flocks, they become of a pale dun color above, the plumage being shafted with dark brown, and the tail white or nearly so. At this season they are extremely fat, and esteemed excellent eating. Experienced gunners always select the lightest colored ones from a flock, as being uniformly the fattest.

The female of this species is generally larger than the male. In the months of October and November they gradually disappear.

GREAT MARBLED GODWIT.

SCOLOPAX FEDOA.[Plate LVI.—Fig. 4.—*Female.*]

Arct. Zool. p. 465, No. 371.—*La Barge rousse de Baie de Hudson*, BUFF. VII, 507.—PEALE'S *Museum*, No. 4019.

THIS is another transient visitant of our sea coasts in spring and autumn, to and from its breeding place in the north. Our gunners call it the *Straight-billed Curlew*, and sometimes the *Red Curlew*. It is a shy, cautious, and watchful bird; yet so strongly are they attached to each other, that on wounding one in a flock, the rest are immediately arrested in their flight, making so many circuits over the spot where it lies fluttering and screaming, that the sportsman often makes great destruction among them. Like the Curlew, they may also be enticed within shot, by imitating their call or whistle; but can seldom be approached without some such manœuvre. They are much less numerous than the Short-billed Curlews, with whom, however, they not unfrequently associate. They are found among the salt marshes in May, and for some time in June, and also on their return in October and November; at which last season they are usually fat, and in high esteem for the table.

The female of this bird having been described by several writers as a distinct species from the male, it has been thought proper to figure the former; the chief difference consists in the undulating bars of black with which the breast of the male is marked, and which are wanting in the female.

The male of the Great Marbled Godwit is nineteen inches long, and thirty-four inches in extent; the bill is nearly six inches

in length, a little turned up towards the extremity, where it is black, the base is of a pale purplish flesh color; chin and upper part of the throat whitish; head and neck mottled with dusky brown and black on a ferruginous ground; breast barred with wavy lines of black; back and scapulars black, marbled with pale brown; rump and tail coverts of a very light brown, barred with dark brown; tail even, except the two middle feathers, which are a little the longest; wings pale ferruginous, elegantly marbled with dark brown, the four first primaries black on the outer edge; whole lining and lower parts of the wings bright ferruginous; belly and vent light rust color, with a tinge of lake.

The female differs in wanting the bars of black on the breast. The bill does not acquire its full length before the third year.

About fifty different species of the *Scolopax* genus are enumerated by naturalists. These are again by some separated into three classes or sub-genera; *viz.* the straight billed, or Snipes; those with bills bent downwards, or the Curlews; and those whose bills are slightly turned upwards, or Godwits. The whole are a shy, timid and solitary tribe, frequenting those vast marshes, swamps and morasses that frequently prevail in the vicinity of the ocean, and on the borders of large rivers. They are also generally migratory, on account of the periodical freezing of those places in the northern regions where they procure their food. The Godwits are particularly fond of salt marshes; and are rarely found in countries remote from the sea.

TURN-STONE.

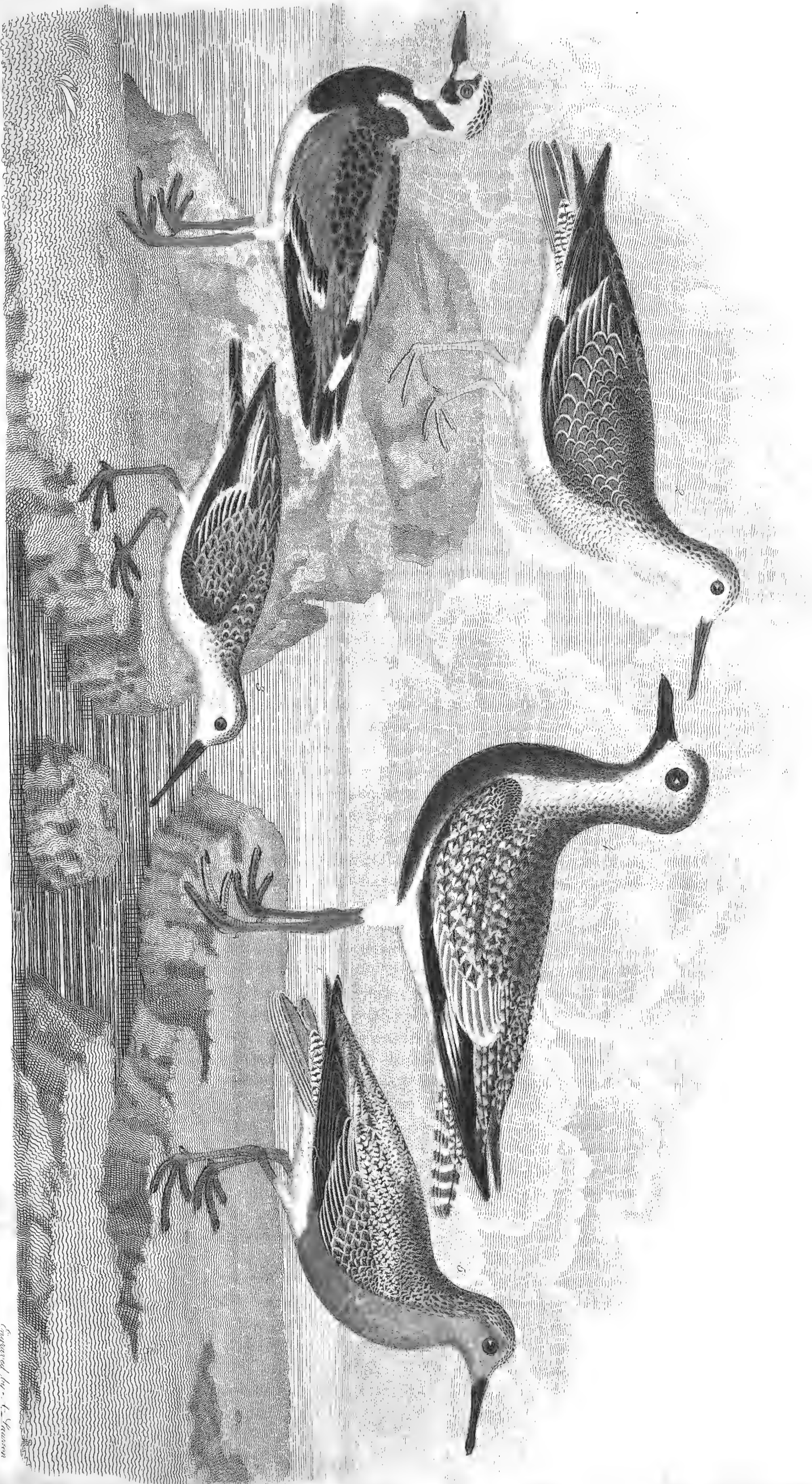
TRINGA INTERPRES.

[Plate LVII.—Fig. 1.]

*Hebridal Sandpiper, Arct. Zool. p. 472, No. 382.—Le Tourne-pierre, BUFF. VII, 130. Pl. Enl. 130.—**BEWICK, II, p. 119, 121.—CATESBY, I, 72.—PEALE'S Museum, No. 4044.*

THIS beautifully variegated species is common to both Europe and America; consequently extends its migrations far to the north. It arrives from the south on the shores of New Jersey in April; leaves them early in June; is seen on its return to the south in October; and continues to be occasionally seen until the commencement of cold weather, when it disappears for the season. It is rather a scarce species in this part of the world, and of a solitary disposition; seldom mingling among the large flocks of other Sandpipers; but either coursing the sands alone, or in company with two or three of its own species. On the coast of Cape May and Egg Harbour this bird is well known by the name of the *Horse-foot Snipe*, from its living, during the months of May and June, almost wholly on the eggs or spawn of the great King Crab, called here by the common people the *Horse-foot*. This animal is the *Monoculus polyphemus* of entomologists. Its usual size is from twelve to fifteen inches in breadth, by two feet in length; tho sometimes it is found much larger. The head, or forepart, is semicircular, and convex above, covered with a thin elastic shelly case. The lower side is concave, where it is furnished with feet and claws resembling those of a crab. The posterior extremity consists of a long, hard, pointed, dagger-like tail, by means of which, when overset by the waves, the animal turns itself on its belly again. The male may be distinguished from the female by

1. Turnstone. 2. Ash-coloured Sandpiper. 3. The Plover. 4. Black-bellied Plover. 5. Red-breasted Sandpiper.



his two large claws having only a single hook each, instead of the forceps of the female. In the bay of Delaware, below Egg island, and in what is usually called Maurice river cove, these creatures seem to have formed one of their principal settlements. The bottom of this cove is generally a soft mud, extremely well suited to their accommodation. Here they are resident, burying themselves in the mud during the winter, but early in the month of May they approach the shore in multitudes to obey the great law of nature, in depositing their eggs within the influence of the sun, and are then very troublesome to the fishermen, who can scarcely draw a seine for them, they are so numerous. Being of slow motion, and easily overset by the surf, their dead bodies cover the shore in heaps, and in such numbers, that for ten miles one might walk on them without touching the ground.

The hogs from the neighboring country are regularly driven down, every spring, to feed on them, which they do with great avidity; tho by this kind of food their flesh acquires a strong disagreeable fishy taste. Even the small turtles, or terrapins, so eagerly sought after by our epicures, contract so rank a taste by feeding on the spawn of the king crab, as to be at such times altogether unpalatable. This spawn may sometimes be seen lying in hollows and eddies in bushels; while the Snipes and Sandpipers, particularly the Turn-stone, are hovering about feasting on the delicious fare. The dead bodies of the animals themselves are hauled up in waggons for manure, and when placed at the hills of corn, in planting time, are said to enrich the soil and add greatly to the increase of the crop.

The Turn-stone derives its name from another singularity it possesses, of turning over with its bill small stones and pebbles, in search of various marine worms and insects. At this sort of work it is exceedingly dexterous; and even when taken and domesticated, is said to retain the same habit.* Its bill seems particu-

* Catesby.

larly well constructed for this purpose, differing from all the rest of its tribe, and very much resembling in shape that of the common Nuthatch. We learn from Mr. Pennant that these birds inhabit Hudson's Bay, Greenland, and the arctic flats of Siberia, where they breed, wandering southerly in autumn. It is said to build on the ground, and to lay four eggs, of an olive color spotted with black, and to inhabit the isles of the Baltic during summer.

The Turn-stone flies with a loud twittering note, and runs with its wings lowered; but not with the rapidity of others of its tribe. It examines more completely the same spot of ground, and, like some of the Woodpeckers, will remain searching in the same place, tossing the stones and pebbles from side to side for a considerable time.

These birds vary greatly in color, scarcely two individuals are to be found alike in markings. These varieties are most numerous in autumn when the young birds are about, and are less frequently met with in spring. The most perfect specimens I have examined are as follows.

Length eight inches and a half, extent seventeen inches; bill blackish horn; frontlet, space passing through the eyes, and thence dropping down and joining the under mandible, black, enclosing a spot of white. Crown white, streaked with black; breast black, from whence it turns up half across the neck; behind the eye a spot of black; upper part of the neck white, running down and skirting the black breast as far as the shoulder; upper part of the back black, divided by a strip of bright ferruginous; scapulars black, glossed with greenish, and interspersed with rusty red; whole back below this pure white, but hid by the scapulars; rump black; tail coverts white; tail rounded, white at the base half, thence black to the extremity; belly and vent white; wings dark dusky, crossed by two bands of white; lower half of the lesser coverts ferruginous; legs and feet a bright vermilion, or red lead;

hind toe standing inwards, and all of them edged with a thick warty membrane. The male and female are alike variable; and when in perfect plumage nearly resemble each other.

Bewick, in his History of British Birds, has figured and described what he considers to be two species of Turn-stone; one of which, he says, is chiefly confined to the southern, and the other to the northern parts of Great Britain. The difference, however, between these two appears to be no greater than commonly occurs among individuals of the same flock, and evidently of the same species, in this country. As several years probably elapse before these birds arrive at their complete state of plumage, many varieties must necessarily appear, according to the different ages of the individuals.

ASH-COLORED SANDPIPER.

TRINGA CINEREA.

[Plate LVII.—Fig. 2.]

Arct. Zool. p. 474, No. 386.—BEWICK, II, p. 102.—PEALE'S Museum, No. 4060.

THE regularly disposed concentric semicircles of white and dark brown that mark the upper parts of the plumage of this species, distinguish it from all others, and give it a very neat appearance. In activity it is superior to the preceding; and traces the flowing and recession of the waves along the sandy beach, with great nimbleness, wading and searching among the loosened particles for its favorite food, which is a small thin oval bivalve shell fish, of a white or pearl color, and not larger than the seed of an apple. These usually lie at a short depth below the surface; but in some places are seen at low water in heaps, like masses of wet grain, in quantities of more than a bushel together. During the latter part of summer and autumn, these minute shell fish constitute the food of almost all those busy flocks that run with such activity along the sands, among the flowing and retreating waves. They are universally swallowed whole; but the action of the bird's stomach, assisted by the shells themselves, soon reduces them to a pulp. If we may judge from their effects they must be extremely nutritious, for almost all those tribes that feed on them are at this season mere lumps of fat. Digging for these in the hard sand would be a work of considerable labour, whereas when the particles are loosened by the flowing of the sea, the birds collect them with great ease and dexterity. It is amusing to observe with what adroitness they follow and elude the tumbling surf, while at the same time they seem wholly intent on collecting their food.

The Ash-colored Sandpiper, the subject of our present account, inhabits both Europe and America. It has been seen in great numbers on the Seal islands near Chatteux Bay; is said to continue the whole summer in Hudson's Bay, and breeds there. Mr. Pennant suspects that it also breeds in Denmark; and says, that they appear in vast flocks on the Flintshire shores during the winter season.* With us they are also migratory, being only seen in spring and autumn. They are plump birds; and by those accustomed to the sedgy taste of this tribe, are esteemed excellent eating.

The length of this species is ten inches, extent twenty; bill black, straight, fluted to nearly its tip, and about an inch and a half long; upper parts brownish ash, each feather marked near the tip with a narrow semicircle of dark brown, bounded by another of white; tail coverts white, marbled with olive; wing quills dusky, shafts white; greater coverts black, tip with white; some of the primaries edged also with white; tail plain pale ash, finely edged and tip with white; crown and hind head streaked with black, ash and white; stripe over the eye, cheeks and chin white, the former marked with pale streaks of dusky, the latter pure; breast white, thinly specked with blackish; belly and vent pure white; legs a dirty yellowish clay color; toes bordered with a narrow thick warty membrane; hind toe directed inwards as in the Turn-stone; claws and eye black.

These birds vary a little in color, some being considerably darker above, others entirely white below; but, in all, the concentric semicircles on the back, scapulars, and wing coverts are conspicuous.

I think it probable that these birds become much lighter colored during the summer, from the circumstance of having shot one late in the month of June, at Cape May, which was of a pale

* Arct. Zool. p. 474.

drab or dun color. It was very thin and emaciated; and on examination appeared to have been formerly wounded, which no doubt occasioned its remaining behind its companions.

Early in December I examined the same coast every day for nearly two weeks without meeting with more than one solitary individual of this species; although in October they were abundant. How far to the southward they extend their migrations, we have no facts that will enable us to ascertain; tho it is probable that the shores of the West India islands afford them shelter and resources during our winter.

THE PURRE.

TRINGA CINCLUS.

[Plate LVII.—Fig. 3.]

LINN. *Syst.* 251.—*Arct. Zool.* p. 475, No. 390.—BEWICK, II, p. 115.—*L'Alouette de mer*, BUFF. VII, 548.—PEALE'S *Museum*, No. 4126.

THIS is one of the most numerous of our *Strand birds*, as they are usually called, that frequent the sandy beach, on the frontiers of the ocean. In its habit it differs so little from the preceding, that, except in being still more active and expert in running and searching among the sand, on the reflux of the waves, as it nimbly darts about for food, what has been said of the former will apply equally to both, they being pretty constant associates on these occasions.

The Purre continues longer with us both in spring and autumn than either of the two preceding; many of them remain during the very severest of the winter, tho the greater part retire to the more genial regions of the south; where I have seen them at such seasons, particularly on the sea coasts of both Carolinas, during the month of February, in great numbers.

These birds, in conjunction with several others, sometimes collect together in such flocks, as to seem, at a distance, a large cloud of thick smoke, varying in form and appearance every instant, while it performs its evolutions in air. As this cloud descends and courses along the shores of the ocean, with great rapidity, in a kind of waving serpentine flight, alternately throwing its dark and white plumage to the eye, it forms a very grand and interesting appearance. At such times the gunners make prodigious slaughter among them; while, as the showers of their com-

panions fall, the whole body often alight, or descend to the surface with them, till the sportsman is completely satiated with destruction. On some of those occasions, while crowds of these victims are fluttering along the sand, the small Pigeon Hawk, constrained by necessity, ventures to make a sweep among the dead in presence of the proprietor, but as suddenly pays for his temerity with his life! Such a tyrant is man, when vested with power and unrestrained by the dread of responsibility.

The Purre is eight inches in length, and fifteen inches in extent; the bill is black, straight, or slightly bent downwards, about an inch and a half long, very thick at the base, and tapering to a slender blunt point at the extremity; eye very small, iris dark hazel; cheeks grey; line over the eye, belly and vent white; back and scapulars of an ashy brown, marked here and there with spots of black bordered with bright ferruginous; sides of the rump white; tail coverts olive, centered with black; chin white; neck below grey; breast and sides thinly marked with pale spots of dusky, in some pure white; wings black, edged and tipped with white; two middle tail feathers dusky, the rest brown ash, edged with white; legs and feet black; toes bordered with a very narrow scalloped membrane. The usual broad band of white crossing the wing, forms a distinguishing characteristic of almost the whole genus.

On examining more than a hundred of these birds they varied considerably in the black and ferruginous spots on the back and scapulars; some were altogether plain, while others were thickly marked, particularly on the scapulars, with a red rust color, centered with black. The females were uniformly more plain than the males; but many of the latter, probably young birds, were destitute of the ferruginous spots. On the twenty-fourth of May the eggs in the females were about the size of partridge shot. In what particular regions of the north these birds breed is altogether unknown.

BLACK-BELLIED PLOVER.

CHARADRIUS APRICARIUS.

[Plate LVII.—Fig. 4.]

*Alcagrim Plover, Arct. Zool. p. 483, No. 398.—Le Pluvier doré à gorge noire, BUFF. VIII, 85.—**PEALE'S Museum, No. 4196.*

THIS bird is known in some parts of the country by the name of the large Whistling Field Plover. It generally makes its first appearance in Pennsylvania late in April; frequents the countries towards the mountains; seems particularly attached to newly ploughed fields, where it forms its nest of a few slight materials, as slightly put together. The female lays four eggs, large for the size of the bird, of a light olive color dashed with black; and has frequently two brood in the same season. It is an extremely shy and watchful bird, tho clamorous during breeding time. The young are without the black color on the breast and belly until the second year, and the colors of the plumage above are likewise imperfect till then. They feed on worms, grubs, winged insects, and various kinds of berries, particularly those usually called dew-berries, and are at such times considered exquisite eating. About the beginning of September they descend with their young to the sea coast, and associate with the numerous multitudes then returning from their breeding places in the north. At this season they abound on the plains of Long island. They have a loud whistling note; often fly at a great height; and are called by many gunners along the coast the Black-bellied Kildeer. The young of the first year have considerable resemblance to those of the Golden Plover; but may be easily distinguished from this last by the largeness of their head and bill, and in being at least two inches more in length.

The greater number of those which I have examined have the rudiments of a hind toe; but the character and manners of the Plover are so conspicuous in the bird, as to determine, at the first glance, the tribe it belongs to. They continue about the sea coast until early in November, when they move off to the south.

This same bird, Mr. Pennant informs us, inhabits all the north of Europe, Iceland, Greenland, and Hudson's Bay, and all the arctic part of Siberia. It is said, that at Hudson's Bay it is called the Hawk's-eye, on account of its brilliancy. It appears, says the same author, in Greenland in the spring, about the southern lakes, and feeds on worms and berries of the heath.

This species is twelve inches long, and twenty-four inches in extent; the bill is thick, deeply grooved on the upper mandible, an inch and a quarter in length, and of a black color; the head and globe of the eye are both remarkably large, the latter deep bluish black; forehead white; crown and hind head black, spotted with golden yellow; back and scapulars dusky, sprinkled with the same golden or orange colored spots, mixed with others of white; breast, belly and vent black; sides of the breast whitish; wing quills black, middle of the shafts white; greater coverts black, tipped with white; lining of the wing black; tail regularly barred with blackish and pure white; tail coverts pure white; legs and feet a dusky lead color; the exterior toe joined to the middle by a broad membrane; hind toe very small.

From the length of time which these birds take to acquire their full colors, they are found in very various stages of plumage. The breast and belly are at first white, gradually appear mottled with black, and finally become totally black. The spots of orange, or golden, on the crown, hind head and back, are at first white, and sometimes even the breast itself is marked with these spots, mingled among the black. In every stage the seemingly disproportionate size of the head, and thickness of the bill, will distinguish this species.

RED-BREASTED SANDPIPER.

TRINGA RUFÆ.

[Plate LVII.—Fig. 5.]

PEALE'S Museum, No. 4050.

OF this prettily marked species I can find no description. The *Tringa Icelandica*, or Aberdeen Sandpiper of Pennant and others, is the only species that has any resemblance to it; the descriptions of that bird, however, will not apply to the present.

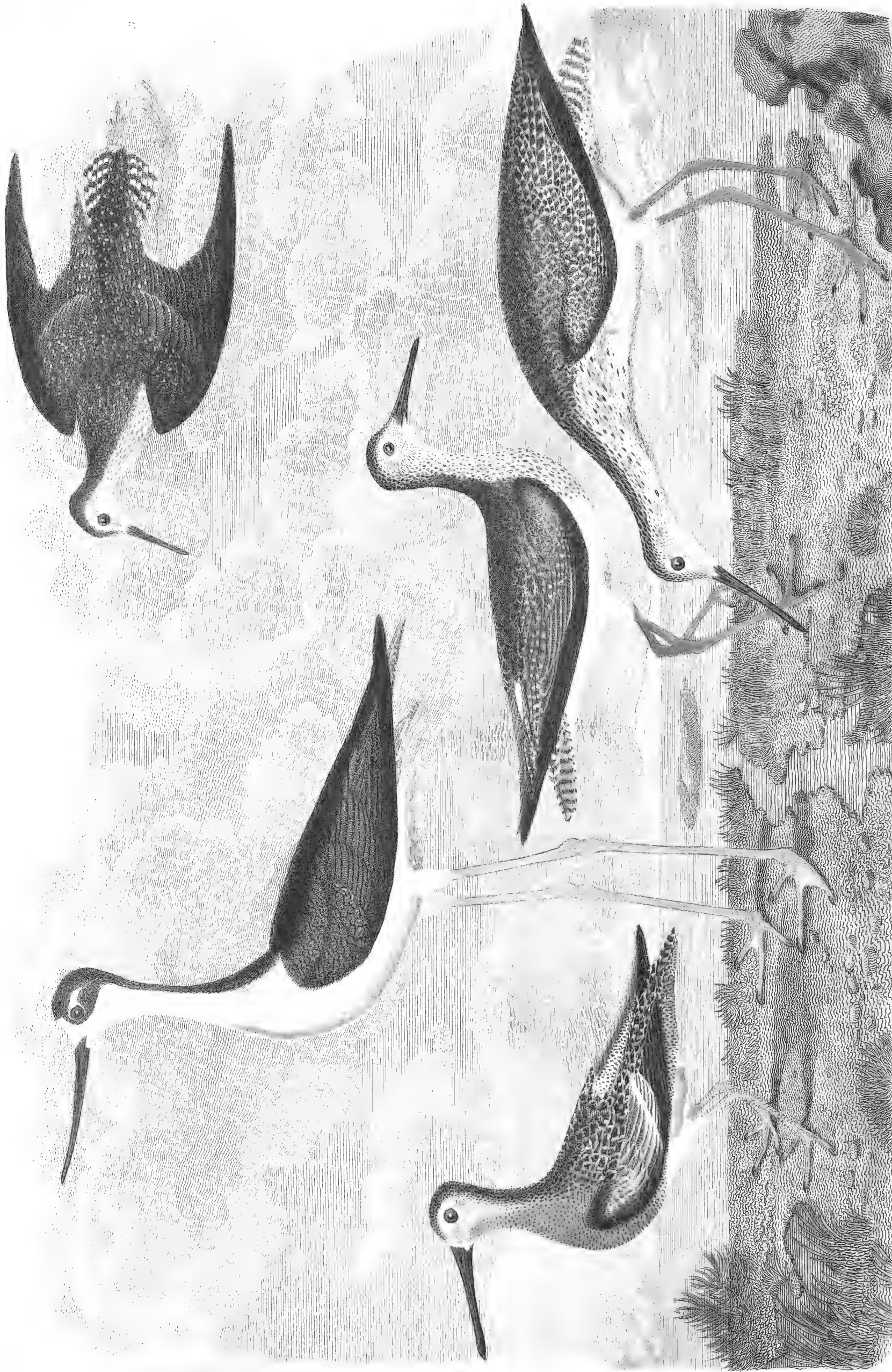
The common name of this species on our sea coast is the *Grey-back*, and among the gunners it is a particular favorite, being generally a plump, tender and excellent bird for the table; and, consequently, brings a good price in market.

The Grey-backs do not breed on the shores of the middle states. Their first appearance is early in May. They remain a few weeks, and again disappear until October. They usually keep in small flocks, alight in a close body together on the sand flats, where they search for the small bivalve shells already described. On the approach of the sportsman they frequently stand fixed and silent for some time; do not appear to be easily alarmed, neither do they run about in the water as much as some others, or with the same rapidity, but appear more tranquil and deliberate. In the month of November they retire to the south.

This species is ten inches long, and twenty in extent; the bill is black, and about an inch and a half long; the chin, eyebrows and whole breast is a pale brownish orange color; crown, hind head from the upper mandible backwards, and neck, dull white, streaked with black; back a pale slaty olive, the feathers tipped with white, barred and spotted with black and pale ferruginous.

nous; tail coverts white, elegantly barred with black; wings plain dusky, black towards the extremity; the greater coverts tipped with white; shafts of the primaries white; tail pale ashy olive, finely edged with white, the two middle feathers somewhat the longest; belly and vent white, the latter marked with small arrow-heads of black; legs and feet black; toes bordered with a narrow membrane; eye small and black.

In some specimens, both of males and females, the red on the breast was much paler, in others it descended as far as the thighs. Both sexes seemed nearly alike.



Drawn from nature by H. H. Brown

1. Red-breasted Sanderling

2. Long-legged Plover

3. Yellow-shanks Sanderling

4. Willet

5. Tattler

Engraved by A. Lawson

RED-BREASTED SNIPE.

SCOLOPAX NOVEBORACENSIS.

[Plate LVIII.—Fig. 1.]

Arct. Zool. p. 464, No. 368.—PEALE'S Museum, No. 3932.

THIS bird has a considerable resemblance to the common Snipe, not only in its general form, size and colors, but likewise in the excellence of its flesh, which is in high estimation. It differs, however, greatly from the common Snipe in its manners, and in many other peculiarities, a few of which, as far as I have myself observed, may be sketched as follows. The Red-breasted Snipe arrives on the sea coast of New Jersey early in April; is seldom or never seen inland: early in May it proceeds to the north to breed, and returns by the latter part of July or beginning of August. During its stay here it flies in flocks, sometimes very high, and has then a loud and shrill whistle, making many evolutions over the marshes; forming, dividing, and reuniting. They sometimes settle in such numbers, and so close together, that eighty-five have been shot at one discharge of a musquet. They spring from the marshes with a loud twirling whistle, generally rising high, and making several circuitous manœuvres in air, before they descend. They frequent the sand bars and mud flats at low water, in search of food; and being less suspicious of a boat than of a person on shore, are easily approached by this medium, and shot down in great numbers. They usually keep by themselves, being very numerous; are in excellent order for the table in September; and on the approach of winter retire to the south.

I have frequently amused myself with the various action of these birds. They fly very rapidly, sometimes wheeling, coursing

and doubling along the surface of the marshes; then shooting high in air, there separating and forming in various bodies, uttering a kind of quivering whistle. Among many which I opened in May, were several females, that had very little rufous below, and the backs were also much lighter and less marbled with ferruginous. The eggs contained in their ovaries were some of them as large as garden peas. Their stomachs contained masses of those small snail shells that lie in millions on the salt marshes: the wrinkles at the base of the bill, and the red breast, are strong characters of this species, as also the membrane which unites the outer and middle toes together.

The Red-breasted Snipe is ten inches and a half long, and eighteen inches in extent; the bill is about two inches and a quarter in length, straight, grooved; black towards the point, and of a dirty eelskin color at the base, where it is tumid and wrinkled; lores dusky; cheeks and eyebrows pale yellowish white, mottled with specks of black; throat and breast a reddish buff color; sides white, barred with black; belly and vent white, the latter barred with dusky; crown, neck above, back, scapulars and tertials black, edged, mottled and marbled with yellowish white pale and bright ferruginous, much in the same manner as the common Snipe; wings plain olive, the secondaries centered and bordered with white; shaft of the first quill very white; rump, tail coverts and tail (which consists of twelve feathers) white, thickly spotted with black; legs and feet dull yellowish green; outer toe united to the middle one by a small membrane; eye very dark. The female, which is paler on the back and less ruddy on the breast, has been described by Mr. Pennant as a separate species.*

These birds doubtless breed not far to the northward of the United States, if we may judge from the lateness of the season when they leave us in spring, the largeness of the eggs in the ova-

* See his Brown Snipe, *Arct. Zool.* No. 369.

ries of the females before they depart, and the short period of time they are absent. Of all our sea-side Snipes it is the most numerous, and the most delicious for the table.

From these circumstances and the crowded manner in which it flies and settles, it is the most eagerly sought after by our gunners, who send them to market in great numbers.

LONG-LEGGED AVOSET.

RECURVIROSTRA HIMANTOPUS.

[Plate LVIII.—Fig. 2.]

Long-legged Plover, *Arct. Zool.* p. 487, No. 405.—TURTON, p. 416.—BEWICK, II, 21.—*L'Echasse*,
BUFF. VIII, 114. *Pl. Enl.* 878.—PEALE'S *Museum*, No. 4210.

NATURALISTS have most unaccountably classed this bird with the genus *Charadrius*, or Plover, and yet affect to make the particular conformation of the bill, legs and feet the rule of their arrangement. In the present subject, however, excepting the trivial circumstance of the want of a hind toe, there is no resemblance whatever of those parts to the bill, legs or feet of the Plover; on the contrary, they are so entirely different, as to create no small surprise at the adoption and general acceptation of a classification, evidently so absurd and unnatural. This appears the more reprehensible, when we consider the striking affinity there is between this bird and the common Avoset, not only in the particular form of the bill, nostrils, tongue, legs, feet, wings and tail, but extending to the voice, manners, food, place of breeding, form of the nest, and even the very color of the eggs of both; all of which are strikingly alike, and point out, at once, to the actual observer of nature, the true relationship of these remarkable birds.

Strongly impressed with these facts, from an intimate acquaintance with the living subjects, in their native wilds, I have presumed to remove the present species to the true and proper place assigned it by nature; and shall now proceed to detail some particulars of its history.

This species arrives on the sea coast of New Jersey about the twenty-fifth of April, in small detached flocks, of twenty or thirty

together. These sometimes again subdivide into lesser parties; but it rarely happens that a pair is found solitary, as during the breeding season they usually associate in small companies. On their first arrival, and indeed during the whole of their residence, they inhabit those particular parts of the salt marshes pretty high up towards the land, that are broken into numerous shallow pools, but are not usually overflowed by the tides during the summer. These pools or ponds are generally so shallow, that with their long legs the Avosets can easily wade them in every direction, and as they abound with minute shell fish, and multitudes of aquatic insects and their larvæ, besides the eggs and spawn of others deposited in the soft mud below, these birds find here an abundant supply of food, and are almost continually seen wading about in such places, often up to the breast in water.

In the vicinity of these *bald places*, as they are called by the country people, and at the distance of forty or fifty yards off, among the thick tufts of grass, one of these small associations, consisting perhaps of six or eight pair, takes up its residence during the breeding season. About the first week in May they begin to construct their nests, which are at first slightly formed of a small quantity of old grass scarcely sufficient to keep the eggs from the wet marsh. As they lay and sit, however, either dreading the rise of the tides or for some other purpose the nest is increased in height, with dry twigs of a shrub very common in the marshes, roots of the salt grass, sea weed, and various other substances, the whole weighing between two and three pounds. This habit of adding materials to the nest after the female begins sitting, is common to almost all other birds that breed in the marshes. The eggs are four in number, of a dark yellowish clay color, thickly marked with large blotches of black. These nests are often placed within fifteen or twenty yards of each other; but the greatest harmony seems to prevail among the proprietors.

While the females are sitting, the males are either wading through the ponds, or roaming over the adjoining marshes; but should a person make his appearance, the whole collect together in the air, flying with their long legs extended behind them, keeping up a continual yelping note of *click click click*. Their flight is steady, and not in short sudden jerks like that of the Plover. As they frequently alight on the bare marsh, they drop their wings, stand with their legs half bent, and trembling as if unable to sustain the burden of their bodies. In this ridiculous posture they will sometimes stand for several minutes, uttering a curring sound, while from the corresponding quiverings of their wings and long legs, they seem to balance themselves with great difficulty. This singular manœuvre is, no doubt, intended to induce a belief that they may be easily caught, and so turn the attention of the person from the pursuit of their nests and young to themselves. The Red-necked Avoset, whom we have introduced in the present volume, practices the very same deception, in the same ludicrous manner, and both alight indiscriminately on the ground or in the water. Both will also occasionally swim for a few feet, when they chance in wading to lose their depth, as I have had several times an opportunity of observing.

The name by which this bird is known on the sea coast is the Stilt, or Tilt, or Long-shanks. They are but sparingly dispersed over the marshes, having, as has been already observed, their particular favorite spots; while in large intermediate tracts, there are few or none to be found. They occasionally visit the shore, wading about in the water and in the mud in search of food, which they scoop up very dexterously with their delicately formed bills. On being wounded while in the water, they attempt to escape by diving, at which they are by no means expert. In autumn their flesh is tender, and well tasted. They seldom raise more than one brood in the season, and depart for the south early in September. As they are well known in Jamaica, it is probable

some of them may winter in that and other of the West India islands.

Mr. Pennant observes that this bird is not a native of northern Europe; and there have been but few instances where it has been seen in Great Britain. It is common, says Latham, in Egypt, being found there in the marshes in October. It is likewise plentiful about the salt lakes; and is often seen on the shores of the Caspian sea, as well as by the rivers which empty themselves into it, and in the southern deserts of Independent Tartary. The same author adds, on the authority of Ray, that it is known at Madrass in the East Indies.

All the figures and descriptions which I have seen of this curious bird, represent the bill as straight, and of almost an equal thickness throughout, which I have never found so in any of the numerous specimens I have myself shot and examined. Many of these accounts, as well as figures, have been taken from dried and stuffed skins, which give but an imperfect and often erroneous idea of the true outlines of nature. The dimensions, colors and markings of a very beautiful specimen, newly shot, were as follow.

Length from the point of the bill to the end of the tail fourteen inches, to the tips of the wings sixteen; extent twenty-eight inches; bill three inches long, slightly curved upwards, tapering to a fine point, the upper mandible rounded above, the whole of a deep black color; nostrils an oblong slit, pervious; tongue short, pointed; forehead, spot behind the eye, lower eyelid, sides of the neck and whole lower parts pure white; back, rump and tail coverts also white, but so concealed by the scapulars as to appear black; tail even, or very slightly forked, and of a dingy white; the vent feathers reach to the tip of the tail below; line before the eye, auriculars, back part of the neck, scapulars and whole wings deep black, richly glossed with green; legs and naked thighs a fine pale carmine; the latter measures three, the former four inches and a half in length, exceedingly thin, and *so flexible that they may*

be bent considerably without danger of breaking. This thinness of the leg enables the bird to wade with expedition, and without fatigue. Feet three toed, the outer toe connected to the middle one by a broad membrane; wings long, extending two inches beyond the tail, and sharp pointed; irides a bright rich scarlet; pupil black. In some the white from the breast extends quite round the neck, separating the black of the hind neck from that of the body; claws blackish horn.

The female is about half an inch shorter, and differs in having the plumage of the upper back and scapulars, and also the tertials, of a deep brown color. The stomach, or gizzard, was extremely muscular, and contained fragments of small snail shells, winged bugs, and a slimy matter, supposed to be the remains of some aquatic worms. In one of these females I counted upwards of one hundred and fifty eggs, some of them as large as buck shot. The singular form of the legs and feet, with the exception of the hind toe and one membrane of the foot, is exactly like those of the Avoset. The upward curvature of the bill, tho not quite so great, is also the same as in the other, being rounded above, and tapering to a delicate point in the same manner. In short, a slight comparison of the two is sufficient to satisfy the most scrupulous observer that nature has classed these two birds together; and so believing, we shall not separate them.

SOLITARY SANDPIPER.

TRINGA SOLITARIA.

[Plate LVIII.—Fig. 3.]

PEALE'S *Museum*, No. 7763.

THIS new species inhabits the watery solitudes of our highest mountains during the summer, from Kentucky to New York; but is no where numerous, seldom more than one or two being seen together. It takes short low flights; runs nimbly about among the mossy margins of the mountain springs, brooks and pools, occasionally stopping, looking at you, and perpetually nodding the head. It is so unsuspicious, or so little acquainted with man, as to permit one to approach within a few yards of it, without appearing to take any notice, or to be the least alarmed. At the approach of cold weather it descends to the muddy shores of our large rivers, where it is occasionally met with, singly, on its way to the south. I have made many long and close searches for the nest of this bird, without success. They regularly breed on Pocano mountain, between Easton and Wilkesbarre, in Pennsylvania, arriving there early in May, and departing in September. It is usually silent, unless when suddenly flushed, when it utters a sharp whistle.

This species has considerable resemblance, both in manners and markings, to the Green Sandpiper of Europe (*Tringa Ochropus*); but differs from that bird in being nearly one third less, and in wanting the white rump and tail coverts of that species; it is also destitute of its silky olive green plumage. How far north its migrations extend I am unable to say.

The Solitary Sandpiper is eight inches and a half long, and fifteen inches in extent; the bill is one inch and a quarter in length, and dusky; nostrils pervious, bill fluted above and below; line over the eye, chin, belly and vent pure white; breast white, spotted with pale olive brown; crown and neck above dark olive, streaked with white; back, scapulars and rump dark brown olive, each feather marked along the edges with small round spots of white; wings plain, and of a darker tint; under tail covert spotted with black; tail slightly rounded, the five exterior feathers on each side white, broadly barred with black; the two middle ones, as well as their coverts plain olive; legs long, slender, and of a dusky green. Male and female alike in color.

YELLOW-SHANKS SNIPE.

SCOLOPAX FLAVIPES.

[Plate LVIII.—Fig. 4.]

Arct. Zool. p. 463, No. 878.—*TURT. Syst.* 395.—*PEALE'S Museum*, No. 3938.

OF this species I have but little to say. It inhabits our sea coasts and salt marshes during summer; frequents the flats at low water, and seems particularly fond of walking among the mud, where it doubtless finds its favorite food in abundance. Having never met with its nest, nor with any person acquainted with its particular place or manner of breeding, I must reserve these matters for further observation. It is a plentiful species, and great numbers are brought to market in Boston, New York, and Philadelphia, particularly in autumn. Tho these birds do not often penetrate far inland, yet on the fifth of September I shot several dozens of them in the meadows of Schuylkill, below Philadelphia. There had been a violent north-east storm a day or two previous, and a large flock of these, accompanied by several species of *Tringa*, and vast numbers of the Short-tailed Tern, appeared at once among the meadows. As a bird for the table the Yellow-shanks, when fat, is in considerable repute. Its chief residence is in the vicinity of the sea, where there are extensive mud flats. It has a sharp whistle of three or four notes when about to take wing, and when flying. These birds may be shot down with great facility if the sportsman, after the first discharge, will only lie close, and permit the wounded birds to flutter about without picking them up; the flock will generally make a circuit and alight repeatedly, until the greater part of them may be shot down.

Length of the Yellow-shanks ten inches, extent twenty; bill slender, straight, an inch and a half in length, and black; line over the eye, chin, belly and vent white; breast and throat grey; general color of the plumage above dusky brown olive, inclining to ash, thickly marked with small triangular spots of dull white; tail coverts white; tail also white, handsomely barred with dark olive; wings plain dusky, the secondaries edged, and all the coverts edged and tipped with white; shafts black; eye also black; legs and naked thighs long and yellow; outer toe united to the middle one by a slight membrane; claws a horn color. The female can scarcely be distinguished from the male.

TELL-TALE GODWIT, OR SNIPE.

SCOLOPAX VOCIFERUS.

[Plate LVIII.—Fig. 5.]

Stone Snipe, Arct. Zool. p. 468, No. 376.—TURT. Syst. p. 396.—PEALE'S Museum, No. 3949.

THIS species and the preceding are both well known to our Duck-gunners, along the sea coast and marshes, by whom they are detested, and stigmatized with the names of the greater and lesser *Tell-tale*, for their faithful vigilance in alarming the Ducks with their loud and shrill whistle, on the first glimpse of the gunner's approach. Of the two the present species is by far the most watchful; and its whistle, which consists of four notes rapidly repeated, is so loud, shrill and alarming, as instantly to arouse every Duck within its hearing, and thus disappoints the eager expectations of the marksman. Yet the cunning and experience of the latter, is frequently more than a match for all of them, and before the poor *Tell-tale* is aware, his warning voice is hushed for ever, and his dead body mingled with those of his associates.

This bird arrives on our coast early in April, breeds in the marshes, and continues until November, about the middle of which month it generally moves off to the south. The nest I have been informed is built in a tuft of thick grass, generally on the borders of a bog or morass. The female, it is said, lays four eggs of a dingy white, irregularly marked with black.

These birds appear to be unknown in Europe. They are simply mentioned by Mr. Pennant, as having been observed in autumn, feeding on the sands on the lower part of Chatteaux Bay,

continually nodding their heads; and were called there Stone Curlews.*

The *Tell-tale* seldom flies in large flocks, at least during summer. It delights in watery bogs, and the muddy margins of creeks and inlets; is either seen searching about for food, or standing in a watchful posture, alternately raising and lowering the head, and on the least appearance of danger utters its shrill whistle, and mounts on wing, generally accompanied by all the feathered tribes that are near. It occasionally penetrates inland along the muddy shores of our large rivers, seldom higher than tide water, and then singly and solitary. They sometimes rise to a great height in the air, and can be distinctly heard when beyond the reach of the eye. In the Fall when they are fat their flesh is highly esteemed, and many of them are brought to our markets. The colors and markings of this bird are so like those of the preceding, that unless in point of size, and the particular curvature of the bill, the description of one might serve for both.

The Tell-tale is fourteen inches and a half long, and twenty-five inches in extent; the bill is two inches and a quarter long, of a dark horn color, and slightly bent upwards; the space round the eye, chin and throat, pure white; lower part of the neck pale ashy white, speckled with black; general color of the upper parts an ashy brown, thickly spotted with black and dull white, each feather being bordered and spotted on the edge with black; wing quills black; some of the primaries, and all of the secondaries with their coverts, spotted round the margins with black and white; head and neck above streaked with black and white; belly and vent pure white; rump white, dotted with black; tail also white, barred with brown; the wings when closed reach beyond the tail; thighs naked nearly two inches above the knees; legs two inches and three quarters long; feet four-toed, the outer joined by a mem-

* Aret. Zool. p. 468.

brane to the middle, the whole of a rich orange yellow. The female differs little in plumage from the male; sometimes the vent is slightly dotted with black, and the upper parts more brown.

Nature seems to have intended this bird as a kind of spy, or centinel, for the safety of the rest; and so well acquainted are they with the watchful vigilance of this species, that, while it continues silent among them, the Ducks feed in the bogs and marshes without the least suspicion. The great object of the gunner is to escape the penetrating glance of this guardian, which is sometimes extremely difficult to effect. On the first whistle of the Tell-tale, if beyond gunshot, the gunner abandons his design, but not without first bestowing a few left-handed blessings on the author of his disappointment.

SPOTTED SANDPIPER.

TRINGA MACULARIA.

[Plate LIX.—Fig. 1.]

Arct. Zool. p. 473, No. 385.—*La Grive d'eau*, BUFF. VIII, 140.—EDW. 277.—PEALE'S *Museum*,
No. 4056.

THIS very common species arrives in Pennsylvania about the twentieth of April, making its first appearance along the shores of our large rivers, and, as the season advances, tracing the courses of our creeks and streams towards the interior. Along the rivers Schuylkill and Delaware, and their tributary waters, they are in great abundance during the summer. This species is as remarkable for perpetually wagging the tail, as some others are for nodding the head; for whether running on the ground, or on the fences, along the rails, or in the water, this motion seems continual; even the young, as soon as they are freed from the shell, run about constantly wagging the tail. About the middle of May they resort to the adjoining corn fields to breed, where I have frequently found and examined their nests. One of these now before me, and which was built at the root of a hill of Indian corn, on high ground, is composed wholly of short pieces of dry straw. The eggs are four, of a pale clay or cream color, marked with large irregular spots of black, and more thinly with others of a paler tint. They are large in proportion to the size of the bird, measuring an inch and a quarter in length, very thick at the great end, and tapering suddenly to the other. The young run about with wonderful speed as soon as they leave the shell, and are then covered with down of a dull drab color, marked with a single streak of black down the middle of the back, and with another behind

Drawn from Nature by C. H. Macdonald.

1. Spotted Sandpiper.

2. Hairy Woodpecker.

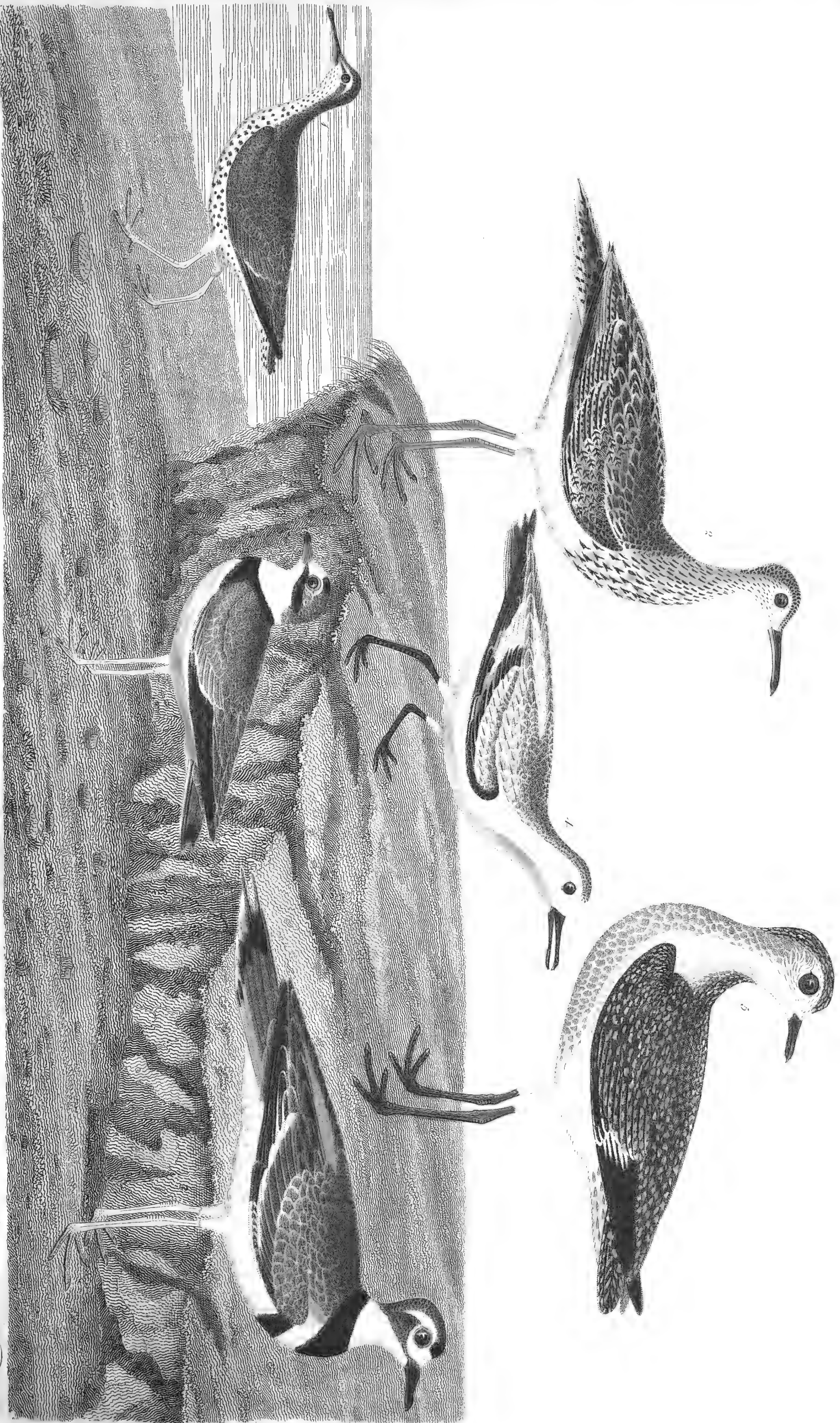
3. King Plover.

4. Sandpiper.

5. Golden P.

6. Killdeer.

Engraved by J. G. Macdonald.



each ear. They have a weak, plaintive note. On the approach of any person the parents exhibit symptoms of great distress, counterfeiting lameness, and fluttering along the ground with seeming difficulty. On the appearance of a dog, this agitation is greatly increased; and it is very interesting to observe with what dexterity she will lead him from her young, by throwing herself repeatedly before him, fluttering off, and keeping just without his reach, on a contrary direction from her helpless brood. My venerable friend, Mr. William Bartram, informs me, that he saw one of these birds defend her young for a considerable time from the repeated attacks of a ground squirrel. The scene of action was on the river shore. The parent had thrown herself, with her two young behind her, between them and the land; and at every attempt of the squirrel to seize them by a circuitous sweep, raised both her wings in an almost perpendicular position, assuming the most formidable appearance she was capable of, and rushed forwards on the squirrel, who, intimidated by her boldness and manner, instantly retreated; but presently returning, was met, as before, in front and on flank by the daring and affectionate bird, who with her wings and whole plumage bristling up, seemed swelled to twice her usual size. The young crowded together behind her, apparently sensible of their perilous situation, moving backwards and forwards as she advanced or retreated. This interesting scene lasted for at least ten minutes; the strength of the poor parent began evidently to flag, and the attacks of the squirrel became more daring and frequent, when my good friend, like one of those celestial agents who in Homer's time so often decided the palm of victory, stepped forward from his retreat, drove the assailant back to his hole, and rescued the innocent from destruction.

The flight of this bird is usually low, skimming along the surface of the water, its long wings making a considerable angle downwards from the body, while it utters a rapid cry of *weet weet weet* as it flutters along, seldom steering in a direct line up or

down the river, but making a long circuitous sweep, stretching a great way out, and gradually bending in again to the shore.

These birds are found occasionally along the sea marshes, as well as in the interior; and also breed in the corn fields there, frequenting the shore in search of food; but rarely associating with the other *Tringæ*. About the middle of October they leave us on their way to the south, and do not, to my knowledge, winter in any of the Atlantic states.

Mr. Pennant is of opinion that this same species is found in Britain; but neither his description, nor that of Mr. Bewick, will apply correctly to this. The following particulars, with the figure, will enable Europeans to determine this matter to their satisfaction.

Length of the Spotted Sandpiper seven inches and a half, extent thirteen inches; bill an inch long, straight, the tip and upper mandible dusky, lower orange; stripe over the eye and lower eyelid pure white; whole upper parts a glossy olive, with greenish reflections, each feather marked with waving spots of dark brown; wing quills deep dusky; bastard wing bordered and tipped with white; a spot of white on the middle of the inner vane of each quill feather except the first; secondaries tipped with white; tail rounded, the six middle feathers greenish olive, the other three on each side white, barred with black; whole lower parts white, beautifully marked with roundish spots of black, small and thick on the throat and breast, larger and thinner as they descend to the tail; legs a yellow clay color; claws black.

The female is as thickly spotted below as the male; but the young birds of both sexes are pure white below, without any spots; they also want the orange on the bill. Those circumstances I have verified on numerous individuals.

BARTRAM'S SANDPIPER.

TRINGA BARTRAMIA.

[Plate LIX.—Fig. 2.]

PEALE'S *Museum*, No. 4040.

THIS bird being as far as I can discover a new species, undescribed by any former author, I have honored it with the name of my very worthy friend, near whose Botanic Gardens, on the banks of the river Schuylkill, I first found it. On the same meadows I have since shot several other individuals of the species, and have thereby had an opportunity of taking an accurate drawing as well as description of it.

Unlike most of their tribe, these birds appeared to prefer running about among the grass, feeding on beetles and other winged insects. There were three or four in company; they seemed extremely watchful, silent, and shy, so that it was always with extreme difficulty I could approach them.

These birds are occasionally seen there during the months of August and September, but whether they breed near I have not been able to discover. Having never met with them on the sea shore, I am persuaded that their principal residence is in the interior, in meadows and such like places. They run with great rapidity, sometimes spreading their tail and dropping their wings, as birds do who wish to decoy you from their nest; when they alight they remain fixed, stand very erect, and have two or three sharp whistling notes as they mount to fly. They are remarkable plump birds weighing upwards of three quarters of a pound; their flesh is superior, in point of delicacy, tenderness and flavour, to any other of the tribe with which I am acquainted.

This species is twelve inches long, and twenty-one in extent; the bill is an inch and a half long, slightly bent downwards, and wrinkled at the base, the upper mandible black on its ridge, the lower, as well as the edge of the upper, of a fine yellow; front, stripe over the eye, neck and breast, pale ferruginous, marked with small streaks of black, which, on the lower part of the breast, assume the form of arrow heads; crown black, the plumage slightly skirted with whitish; chin, orbit of the eye, whole belly and vent pure white; hind head and neck above ferruginous, minutely streaked with black; back and scapulars black, the former slightly skirted with ferruginous, the latter with white; tertials black, bordered with white; primaries plain black; shaft of the exterior quill snowy, its inner vane elegantly pectinated with white; secondaries pale brown, spotted on their outer vanes with black, and tipped with white; greater coverts dusky, edged with pale ferruginous, and spotted with black; lesser coverts pale ferruginous, each feather broadly bordered with white, within which is a concentric semicircle of black; rump and tail coverts deep brown black, slightly bordered with white; tail tapering, of a pale brown orange color, beautifully spotted with black, the middle feathers centered with dusky; legs yellow, tinged with green; the outer toe joined to the middle by a membrane; lining of the wings elegantly barred with black and white; iris of the eye dark, or blue black, eye very large. The male and female are nearly alike.

RING PLOVER.

TRINGA HIATICULA.

[Plate LIX.—Fig. 3.]

Arct. Zool. p. 485, No. 401.—*La petit Pluvier à collier*, BUFF. VIII, 90.—BEWICK, I. 326.—PEALE'S
Museum, No. 4150.

IN a preceding part of this work* a bird by this name has been figured and described, under the supposition that it was the Ring Plover, then in its summer dress; but which, notwithstanding its great resemblance to the present, I now suspect to be a different species. Fearful of perpetuating error, and anxious to retract, where this may inadvertently have been the case, I shall submit to the consideration of the reader the reasons on which my present suspicions are founded.

The present species, or true Ring Plover, and also the former, or light-colored bird, both arrive on the sea coast of New Jersey late in April. The present kind continues to be seen in flocks until late in May, when they disappear on their way farther north; the light-colored bird remains during the summer, forms its nest in the sand, and generally produces two brood in the season. Early in September the present species returns in flocks as before; soon after this, the light-colored kind go off to the south, but the other remain a full month later. European writers inform us, that the Ring Plover has a sharp twittering note, and this account agrees exactly with that of the present; the light-colored species, on the contrary, has a peculiarly soft and musical note, similar to the tone of a German flute, which it utters while running along

* See vol. V, plate xxxvii, fig. 3.

the sand with expanded tail and hanging wings, endeavouring to decoy you from its nest. The present species is never seen to breed here; and tho I have opened great numbers of them as late as the twentieth of May, the eggs which the females contained were never larger than small bird-shot; while, at the same time, the light-colored kind had every where begun to lay in the little cavities which they had dug in the sand on the beach. These facts being considered, it seems difficult to reconcile such difference of habit in one and the same bird. The Ring Plover is common in England, and agrees exactly with the one now before us; but the light-colored species, as far as I can learn, is not found in Britain; specimens of it have indeed been taken to that country, where the most judicious of their ornithologists have concluded it to be still the Ring Plover, but to have changed from the effect of climate. Mr. Pennant, in speaking of the true Ring Plover, makes the following remarks: "Almost all which I have seen from the northern parts of North America have had the black marks extremely faint, and almost lost. The climate had almost destroyed the specific marks; yet in the bill and habit preserved sufficient to make the kind very easily ascertained." These traits agree exactly with the light-colored species described in our fifth volume. But this excellent naturalist was perhaps not aware that we have the true Ring Plover here in spring and autumn, agreeing in every respect with that of Britain, and at least in equal numbers; why, therefore, has not the climate equally affected the present and the former sort, if both are the same species? These inconsistencies cannot be reconciled but by supposing each to be a distinct species, which, tho approaching extremely near to each other in external appearance, have each their peculiar notes, color, and places of breeding.

The Ring Plover is seven inches long, and fourteen inches in extent; bill short, orange colored, tip with black; front and chin white, encircling the neck; upper part of the breast black; rest of

the lower parts pure white; fore part of the crown black; band from the upper mandible covering the auriculars, also black; back, scapulars and wing coverts of a brownish ash color; wing quills dusky black, marked with an oval spot of white about the middle of each; tail olive, deepening into black, and tip with white; legs dull yellow; eye dark hazel, eyelids yellow.

This bird is said to make no nest, but to lay four eggs of a pale ash color spotted with black, which she deposits on the ground.* The eggs of the light-colored species, formerly described, are of a pale cream color, marked with small round dots of black, as if done with a pen.

The Ring Plover, according to Pennant, inhabits America down to Jamaica and the Brasils. Is found in summer in Greenland; migrates from thence in autumn. Is common in every part of Russia and Siberia. Was found by the navigators as low as Owyhee, one of the Sandwich islands, and as light-colored as those of the highest latitudes.†

* Bewick.

† Aret. Zool. p. 485.

SANDERLING PLOVER.

CHARADRIUS CALIDRIS.

[Plate LIX.—Fig. 4.]

LINN. *Syst.* 255.—*Arct. Zool.* p. 486, No. 403.—*Le Sanderling*, BUFF. VII, 532.—BEWICK, II, 19.—
 PEALE'S *Museum*, No. 4204.

IN this well known bird we have another proof of the imperfection of systematic arrangement, where no attention is paid to the general habits; but where one single circumstance is sometimes considered sufficient to determine the species. The genus Plover is characterized by several strong family traits, one of which is that of wanting the hind toe. The Sandpipers have also their peculiar external characters of bill, general form, &c., by which they are easily distinguished from the former. The present species, tho possessing the bill, general figure, manners and voice of the Sandpipers, feeding in the same way, and associating with these in particular; yet, wanting the hind toe, has been classed with the Plovers, with whom, this single circumstance excepted, it has no one characteristic in common. Tho we have not, in the present instance, presumed to alter this arrangement, yet it appears both reasonable and natural that where the specific characters in any bird seem to waver between two species, that the figure, voice and habits of the equivocal one should always be taken into consideration, and be allowed finally to determine the class to which it belongs. Had this rule been followed in the present instance, the bird we are now about to describe would have undoubtedly been classed with the Sandpipers.

The history of this species has little in it to excite our interest or attention. It makes its appearance on our sea coasts early in

September; continues during the greater part of winter; and on the approach of spring, returns to the northern regions to breed. While here it seems perpetually busy running along the wave-worn strand, following the flux and reflux of the surf, eagerly picking up its food from the sand amid the roar of the ocean. It flies in numerous flocks, keeping a low meandering course along the ridges of the tumbling surf. On alighting, the whole scatter about after the receding wave, busily picking up those minute bivalves already described. As the succeeding wave returns it bears the whole of them before it in one crowded line; then is the moment seized by the experienced gunner to sweep them in flank with his destructive shot. The flying survivors, after a few ærial meanders, again alight, and pursue their usual avocation as busily and unconcernedly as before. These birds are most numerous on extensive sandy beaches in front of the ocean. Among rocks, marshes, or stones covered with sea weed, they seldom make their appearance.

The Sanderling is eight inches long, and fourteen inches in extent; the bill is black, an inch and a quarter in length, slender, straight, fluted along the upper mandible, and exactly formed like that of the Sandpiper; the head, neck above, back, scapulars and tertials are grey white; the shafts blackish, and the webs tinged with brownish ash; shoulder of the wing black; greater coverts broadly tipped with white; quills black, crossed with a transverse band of white; the tail extends a little beyond the wings, and is of a greyish ash color, edged with white, the two middle feathers being about half an inch longer than the others; eye dark hazel; whole lower parts of the plumage pure white; legs and naked part of the thighs black; feet three-toed, each divided to its origin and bordered with a narrow membrane.

Such are the most common markings of this bird, both of males and females, particularly during the winter; but many others occur among them, early in the autumn, thickly marked or spotted with black on the crown, back, scapulars and tertials, so as to ap-

per much mottled, having as much black as white on those parts. In many of these I have observed the plain grey plumage coming out about the middle of October; so that, perhaps, the grey may be their winter, and the spotted their summer dress.

I have also met with many specimens of this bird, not only thickly speckled with white and black above, but also on the neck, and strongly tinged on both with ferruginous; in which dress it has been mistaken by Mr. Pennant and others for a new species; the description of his "Ruddy Plover" agreeing exactly with this.* A figure of the Sanderling in this state of plumage will be introduced in some part of the present work.

* See Arct. Zool. p. 486, No. 404.

GOLDEN PLOVER.

CHARADRIUS PLUVIALIS.

[Plate LIX.—Fig. 5.]

Arct. Zool. p. 493, No. 399.—BEWICK, I, 322.—*Le Pluvier doré*, BUFF. VIII, 81. *Pl. Enl.* 904.—PEALE'S *Museum*, No. 4198.

THIS beautiful species visits the sea coast of New York and New Jersey in spring and autumn; but does not, as far as I can discover, breed in any part of the United States. They are most frequently met with in the months of September and October; soon after which they disappear. The young birds of the great Black-bellied Plover are sometimes mistaken for this species. Hence the reason why Mr. Pennant remarks his having seen a variety of the Golden Plover, with black breasts, which he supposed to be the young.*

The Golden Plover is common in the northern parts of Europe. It breeds on high and heathy mountains. The female lays four eggs, of a pale olive color, variegated with blackish spots. They usually fly in small flocks, and have a shrill whistling note. They are very frequent in Siberia, where they likewise breed; extend also to Kamtschatka, and as far south as the Sandwich isles. In this latter place, Mr. Pennant remarks, "they are very small."

Although these birds are occasionally found along our sea coast, from Georgia to Maine, yet they are no where numerous; and I have never met with them in the interior. Our mountains being generally covered with forest, and no species of heath having, as yet, been discovered within the boundaries of the United States,

* *Arct. Zool.* p. 484.

these birds are probably induced to seek the more remote arctic regions of the continent to breed and rear their young in, where the country is more open, and unincumbered with woods.

The Golden Plover is ten inches and a half long, and twenty-one inches in extent; bill short, of a dusky slate color; eye very large, blue black; nostrils placed in a deep furrow, and half covered with a prominent membrane; whole upper parts black, thickly marked with roundish spots of various tints of golden yellow; wing coverts and hind part of the neck pale brown, the latter streaked with yellowish; front, broad line over the eye, chin and sides of the same, yellowish white, streaked with small pointed spots of brown olive; breast grey, with olive and white; sides under the wings marked thinly with transverse bars of pale olive; belly and vent white; wing quills black, the middle of the shafts marked with white; greater coverts black, tip with white; tail rounded, black, barred with triangular spots of golden yellow; legs dark dusky slate; feet three-toed, with generally the slight rudiments of a heel, the outer toe connected as far as the first joint with the middle one. The male and female differ very little in color.

KILDEER PLOVER.

CHARADRIUS VOCIFERUS.

[Plate LIX.—Fig. 6.]

Arct. Zool. No. 400.—CATESBY, I, 71.—*Le Kildir*, BUFF. VIII, 96.—PEALE'S *Museum*, No. 4174.

THIS restless and noisy bird is known to almost every inhabitant of the United States, being a common and pretty constant resident. During the severity of winter, when snow covers the ground, it retreats to the sea shore, where it is found at all seasons; but no sooner have the rivers broke up, than its shrill note is again heard, either roaming about high in air, tracing the shore of the river, or running amidst the watery flats and meadows. As spring advances it resorts to the newly ploughed fields, or level plains bare of grass, interspersed with shallow pools; or, in the vicinity of the sea, dry bare sandy fields. In some such situation it generally chooses to breed, about the beginning of May. The nest is usually slight, a mere hollow, with such materials drawn in around it as happen to be near, such as bits of sticks, straw, pebbles or earth. In one instance I found the nest of this bird paved with fragments of clam and oyster shells, and very neatly surrounded with a mound or border of the same, placed in a very close and curious manner. In some cases there is no vestige whatever of a nest. The eggs are usually four, of a bright rich cream or yellowish clay color, thickly marked with blotches of black. They are large for the size of the bird, measuring more than an inch and a half in length, and a full inch in width, tapering to a narrow point at the great end.

Nothing can exceed the alarm and anxiety of these birds during the breeding season. Their cries of *Kildeer, kildeer*, as they

winnow the air over head, dive and course around you, or run along the ground counterfeiting lameness, are shrill and incessant. The moment they see a person approach, they fly or run to attack him with their harassing clamour, continuing it over so wide an extent of ground, that they puzzle the pursuer as to the particular spot where the nest or young are concealed; very much resembling, in this respect, the Lapwing of Europe. During the evening, and long after dusk, particularly in moonlight, their cries are frequently heard with equal violence, both in the Spring and Fall. From this circumstance, and their flying about both after dusk and before dawn, it appears probable that they see better at such times than most of their tribe. They are known to feed much on worms, and many of these rise to the surface during the night. The prowling of Owls, may also alarm their fears for their young at those hours; but whatever may be the cause, the facts are so.

The Kildeer is more abundant in the southern states in winter than in summer. Among the rice fields, and even around the planters' yards in South Carolina, I observed them very numerous in the months of February and March. There the negro boys frequently practise the barbarous mode of catching them with a line, at the extremity of which is a crooked pin with a worm on it. Their flight is something like that of the Tern, but more vigorous; and they sometimes rise to a great height in the air. They are fond of wading in pools of water; and frequently bathe themselves during the summer. They usually stand erect on their legs, and run or walk with the body in a stiff horizontal position; they run with great swiftness, and are also strong and vigorous in the wings. Their flesh is eaten by some, but is not in general esteem; tho others say, that in the Fall, when they become very fat, it is excellent.

During the extreme droughts of summer, these birds resort to the gravelly channel of brooks and shallow streams, where they can wade about in search of aquatic insects: at the close of sum-

mer they generally descend to the sea shore, in small flocks, seldom more than ten or twelve being seen together. They are then more serene and silent, as well as difficult to be approached.

The Kildeer is ten inches long, and twenty inches in extent; the bill is black; frontlet, chin and ring round the neck white; fore part of the crown, and auriculars from the bill backwards, blackish olive; eyelids bright scarlet; eye very large and of a full black; from the center of the eye backwards a stripe of white; round the lower part of the neck is a broad band of black; below that a band of white, succeeded by another rounding band or crescent of black; rest of the lower parts pure white; crown and hind head light olive brown; back, scapulars and wing coverts olive brown, skirted with brownish yellow; primary quills black, streaked across the middle with white; bastard wing tip with white; greater coverts broadly tip with white; rump and tail coverts orange; tail tapering, dull orange, crossed near the end with a broad bar of black, and tip with orange, the two middle feathers near an inch longer than the adjoining ones; legs and feet a pale light clay color. The tertials, as usual in this tribe, are very long, reaching nearly to the tips of the primaries; exterior toe joined by a membrane to the middle one, as far as the first joint.

GREAT TERN.

STERNA HIRUNDO.

[Plate LX.—Fig. 1.]

*Arct. Zool. p. 524, No. 448.—Le pierre garin, ou grande Hirondelle de mer, BUFF. VIII, 331. Pl. Enl.*987.—BEWICK, II, 181.—PEALE'S *Museum*, No. 3485.

THIS bird belongs to a tribe very generally dispersed over the shores of the ocean. Their generic characters are these:—Bill straight, sharp pointed, a little compressed and strong; nostrils linear; tongue slender, pointed; legs short; feet webbed; hind toe and its nail straight; wings long; tail generally forked. Turton enumerates twenty-five species of this genus, scattered over various quarters of the world; six of which, at least, are natives of the United States. From their long pointed wings they are generally known to seafaring people and others residing near the sea shore by the name of *Sea Swallows*; tho some few, from their near resemblance, are confounded with the Gulls.

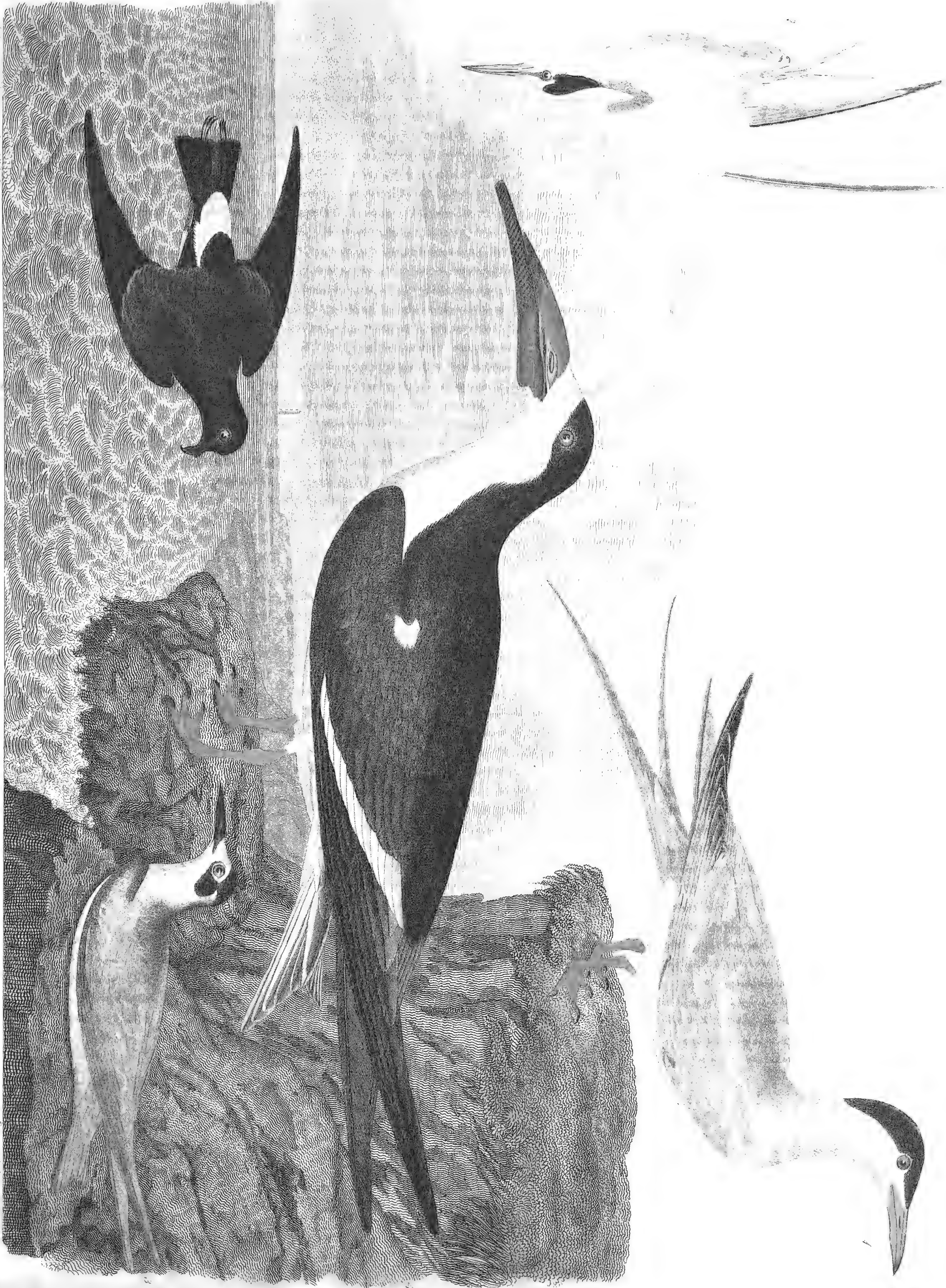
The present species, or Great Tern, is common to the shores of Europe, Asia and America. It arrives on the coast of New Jersey about the middle or twentieth of April, led no doubt by the multitudes of fish which at that season visit our shallow bays and inlets. By many it is called the Sheep's-head Gull, from arriving about the same time with the fish of that name.

About the middle or twentieth of May this bird commences laying. The preparation of a nest, which costs most other birds so much time and ingenuity, is here altogether dispensed with. The eggs, generally three in number, are placed on the surface of the dry drift grass, on the beach or salt marsh, and covered by the female only during the night, or in wet, raw or stormy wea-

Illustration from "Nature by William"

1. Great Tern 2. P.O. 3. Short-tailed T. 4. Black Hummer 5. House Finch 6. House Wren

Engraved by W. Brown



ther. At all other times the hatching of them is left to the heat of the sun. These eggs measure an inch and three quarters in length, by about an inch and two-tenths in width, and are of a yellowish dun color, sprinkled with dark brown and pale Indian ink. Notwithstanding they seem thus negligently abandoned during the day, it is very different in reality. One or both of the parents are generally fishing within view of the place, and on the near approach of any person instantly make their appearance over head; uttering a hoarse jarring kind of cry, and flying about with evident symptoms of great anxiety and consternation. The young are generally produced at intervals of a day or so from each other, and are regularly and abundantly fed for several weeks, before their wings are sufficiently grown to enable them to fly. At first the parents alight with the fish which they have brought in their mouth or in their bill, and tearing it in pieces distribute it in such portions as their young are able to swallow. Afterwards they frequently feed them without alighting, as they skim over the spot; and as the young become nearly ready to fly, they drop the fish among them where the strongest and most active has the best chance to gobble it up. In the mean time, the young themselves frequently search about the marshes, generally not far apart, for insects of various kinds; but so well acquainted are they with the peculiar language of their parents that warn them of the approach of an enemy, that on hearing their cries they instantly squat, and remain motionless until the danger be over.

The flight of the Great Tern, and indeed of the whole tribe, is not in the sweeping shooting manner of the land Swallows, notwithstanding their name; the motions of their long wings are slower, and more in the manner of the Gull. They have, however, great powers of wing and strength in the muscles of the neck, which enable them to make such sudden and violent plunges, and that from a considerable height too, headlong on their prey, which they never seize but with their bills. In the evening, I

have remarked, as they retired from the upper parts of the bays, rivers and inlets to the beach for repose, about breeding time, that each generally carried a small fish in his bill.

As soon as the young are able to fly, they lead them to the sandy shoals and ripples where fish are abundant; and while they occasionally feed them, teach them by their example to provide for themselves. They sometimes penetrate a great way inland, along the courses of rivers; and are occasionally seen about all our numerous ponds, lakes and rivers, most usually near the close of the summer.

This species inhabits Europe as high as Spitzbergen; is found on the arctic coasts of Siberia and Kamtschatka, and also on our own continent as far north as Hudson's Bay. In New England it is called by some the Mackarel Gull. It retires from all these places, at the approach of winter, to more congenial seas and seasons.

The Great Tern is fifteen inches long, and thirty inches in extent; bill reddish yellow, sometimes brilliant crimson, slightly angular on the lower mandible, and tipped with black; whole upper part of the head black, extending to a point half way down the neck behind, and including the eyes; sides of the neck and whole lower parts pure white; wing quills hoary, as if bleached by the weather, long and pointed; whole back, scapulars and wing bluish white, or very pale lead color; rump and tail coverts white; tail long and greatly forked, the exterior feathers being three inches longer than the adjoining ones, the rest shortening gradually for an inch and a half to the middle ones, the whole of a pale lead color; the outer edge of the exterior ones black; legs and webbed feet brilliant red lead; membranes of the feet deeply scalloped; claws large and black, middle one the largest. The primary quill feathers are generally dark on their inner edges. The female differs in having the two exterior feathers of the tail considerably shorter. The voice of these birds is like the harsh jarring of an

opening door, rusted on its hinges. The bone of the skull is remarkably thick and strong, as also the membrane that surrounds the brain; in this respect resembling the Woodpecker's. In both this provision is doubtless intended to enable the birds to support, without injury, the violent concussions caused by the plunging of the one, and the chiselling of the other.

LESSER TERN.

STERNA MINUTA.

[Plate LX.—Fig. 2.]

*Arct. Zool. No. 449.—La petite Hirondelle de mer, BUFF. VIII, 337. Pl. Enl. 996.—BEWICK, II, 183.**PEALE'S Museum, No. 3505.*

THIS beautiful little species looks like the preceding in miniature, but surpasses it far in the rich glossy satin-like white plumage with which its throat, breast and whole lower parts are covered. Like the former, it is also a bird of passage, but is said not to extend its migrations to so high a northern latitude, being more delicate and susceptible of cold. It arrives on the coast somewhat later than the other, but in equal and perhaps greater numbers; coasts along the shores and also over the pools in the salt marshes in search of prawns, of which it is particularly fond; hovers, suspended in the air, for a few moments above its prey, exactly in the manner of some of our small Hawks, and dashes headlong down into the water after it, generally seizing it with its bill; mounts instantly again to the same height, and moves slowly along as before, eagerly examining the surface below. About the twenty-fifth of May, or beginning of June, the female begins to lay. The eggs are dropt on the dry and warm sand, the heat of which, during the day, is fully sufficient for the purpose of incubation. This heat is sometimes so great, that one can scarcely bear the hand in it for a few moments without inconvenience. The wonder would therefore be the greater should the bird sit on her eggs during the day, when her warmth is altogether unnecessary and perhaps injurious, than that she should cover them only during the damps of night, and in wet and stormy weather; and fur-

nishes another proof that the actions of birds are not the effect of mere blind impulse, but of volition, regulated by reason, depending on various incidental circumstances to which their parental cares are ever awake. I lately visited those parts of the beach on Cape May where this little bird breeds. The eggs, generally four in number, were placed on the flat sands, safe beyond the reach of the highest summer tide. They were of a yellowish brown color, blotched with rufous, and measured nearly an inch and three quarters in length. During my whole stay, these birds flew in crowds around me, and often within a few yards of my head, squeaking like so many young pigs which their voice strikingly resembles. A Humming-bird, that had accidentally strayed to the place, appeared suddenly among this outrageous group, several of whom darted angrily at him; but he shot like an arrow from them, directing his flight straight towards the ocean. I have no doubt but the distressing cries of the Terns had drawn this little creature to the scene, having frequently witnessed his anxious curiosity on similar occasions in the woods.

The Lesser Tern feeds on beetles, crickets, spiders and other insects which it picks up from the marshes, as well as on small fish, on which it plunges at sea. Like the former, it also makes extensive incursions inland along the river courses, and has frequently been shot several hundred miles from the sea. It sometimes sits for hours together on the sands, as if resting after the fatigues of flight to which it is exposed.

The Lesser Tern is extremely tame and unsuspicious, often passing you on its flight, and within a few yards, as it traces the windings and indentations of the shore in search of its favorite prawns and skippers. Indeed at such times it appears either altogether heedless of man, or its eagerness for food overcomes its apprehensions for its own safety. We read in ancient authors that the fishermen used to float a cross of wood, in the middle of which was fastened a small fish for a bait, with limed twigs stuck to the

four corners, on which the bird darting was entangled by the wings. But this must have been for mere sport, or for its feathers, the value of the bird being scarcely worth the trouble, as they are generally lean, and the flesh savouring strongly of fish.

The Lesser Tern is met with in the south of Russia, and about the Black and Caspian sea; also in Siberia about the Irtish.* With the former, it inhabits the shores of England during the summer, where it breeds and migrates, as it does here, to the south as the cold of autumn approaches.

This species is nine and a half inches long, and twenty inches in extent; bill bright reddish yellow; nostril pervious; lower mandible angular; front white, reaching in two narrow points over the eye; crown, band through the eye and hind head black, tapering to a point as it descends; cheeks, sides of the neck and whole lower parts of the most rich and glossy white, like the brightest satin; upper parts of the back and wings a pale glossy ash or light lead color; the outer edges of the three exterior primaries black, their inner edges white; tail pale ash, but darker than the back, and forked, the two outer feathers an inch longer, tapering to a point; legs and feet reddish yellow; webbed feet, claws and hind toe exactly formed like those of the preceding. The female nearly resembles the male, with the exception of having the two exterior tail feathers shorter.

* Pennant.

SHORT-TAILED TERN.

STERNA PLUMBEA.

[Plate LX.—Fig. 3.]

PEALE'S *Museum*, No. 3519.

A SPECIMEN of this bird was first sent me by Mr. Beasley of Cape May; but being in an imperfect state, I could form no correct notion of the species; sometimes supposing it might be a young bird of the preceding Tern. Since that time, however, I have had an opportunity of procuring a considerable number of this same kind, corresponding almost exactly with each other. I have ventured to introduce it in this place as a new species; and have taken pains to render the figure in the plate a correct likeness of the original.

On the sixth of September, 1812, after a violent north-east storm, which inundated the meadows of Schuylkill in many places, numerous flocks of this Tern all at once made their appearance, flying over those watery spaces, picking up grasshoppers, beetles, spiders and other insects that were floating on the surface. Some hundreds of them might be seen at the same time, and all seemingly of one sort. They were busy, silent and unsuspicious, darting down after their prey without hesitation, tho perpetually harassed by gunners whom the novelty of their appearance had drawn to the place. Several flocks of the Yellow-shanks Snipe, and a few Purres, appeared also in the meadows at the same time, driven thither doubtless by the violence of the storm.

I examined upwards of thirty individuals of this species by dissection, and found both sexes alike in color. Their stomachs contained grasshoppers, crickets, spiders, &c., but no fish. The

people on the sea coast have since informed me that this bird comes to them only in the Fall, or towards the end of summer; and is more frequently seen about the mill-ponds and fresh water marshes than in the bays; and add, that it feeds on grasshoppers and other insects which it finds on the meadows and marshes, picking them from the grass, as well as from the surface of the water. They have never known it to associate with the Lesser Tern, and consider it altogether a different bird. This opinion seems confirmed by the above circumstances, and by the fact of its greater extent of wing, being full three inches wider than the Lesser Tern; and also making its appearance after the others have gone off.

The Short-tailed Tern measures eight inches and a half from the point of the bill to the tip of the tail, and twenty-three inches in extent; the bill is an inch and a quarter in length, sharp pointed, and of a deep black color; a patch of black covers the crown, auriculars, spot before the eye and hind head; the forehead, eyelids, sides of the neck, passing quite round below the hind head, and whole lower parts are pure white; the back is dark ash, each feather broadly tipped with brown; the wings a dark lead color, extending an inch and a half beyond the tail, which is also of the same tint, and slightly forked; shoulders of the wing brownish ash; legs and webbed feet tawny. It had a sharp shrill cry when wounded and taken.

This is probably the *Brown Tern* mentioned by Willoughby, of which so many imperfect accounts have already been given. The figure in the plate, like those which accompany it, is reduced to one half the size of life.

BLACK SKIMMER, OR SHEERWATER.

RHYNCHOPS NIGRA.

[Plate LX.—Fig. 4.]

Arct. Zool. No. 445.—CATESBY, I, 90.—*Le Bec en Ciseau*, BUFF. VIII, 454, *tab.* 36.—PEALE'S *Museum*, No. 3530.

THIS truly singular fowl is the only species of its tribe hitherto discovered. Like many others, it is a bird of passage in the United States; and makes its first appearance on the shores of New Jersey early in May. It resides there, as well as along the whole Atlantic coast, during the summer; and retires early in September. Its favorite haunts are low sand bars, raised above the reach of the summer tides; and also dry flat sands on the beach in front of the ocean. On such places it usually breeds along the shores of Cape May, in New Jersey. On account of the general coldness of the spring there, the Sheerwater does not begin to lay until early in June, at which time these birds form themselves into small societies, fifteen or twenty pair frequently breeding within a few yards of each other. The nest is a mere hollow formed in the sand, without any other materials. The female lays three eggs, almost exactly oval, of a clear white, marked with large round spots of brownish black, and intermixed with others of pale Indian ink. These eggs measure one inch and three quarters, by one inch and a quarter. Half a bushel and more of eggs has sometimes been collected from one sand bar, within the compass of half an acre. These eggs have something of a fishy taste; but are eaten by many people on the coast. The female sits on them only during the night, or in wet and stormy weather. The young remain for several weeks before they are able to fly; are fed with great

assiduity by both parents; and seem to delight in lying with loosened wings, flat on the sand, enjoying its invigorating warmth. They breed but once in the season.

The singular conformation of the bill of this bird has excited much surprise; and some writers, measuring the divine proportions of nature by their own contracted standards of conception, in the plenitude of their vanity have pronounced it to be "a lame and defective weapon." Such ignorant presumption, or rather impiety, ought to hide its head in the dust on a calm display of the peculiar construction of this singular bird, and the wisdom by which it is so admirably adapted to the purposes or mode of existence for which it was intended. The Sheerwater is formed for skimming, while on wing, the surface of the sea for its food, which consists of small fish, shrimps, young fry, &c., whose usual haunts are near the shore, and towards the surface. That the lower mandible, when dipt into and cleaving the water, might not retard the bird's way, it is thinned and sharpened like the blade of a knife; the upper mandible being at such times elevated above water is curtailed in its length, as being less necessary, but tapering gradually to a point, that, on shutting, it may offer less opposition. To prevent inconvenience from the rushing of the water the mouth is confined to the mere opening of the gullet, which indeed prevents mastication taking place there; but the stomach, or gizzard, to which this business is solely allotted, is of uncommon hardness, strength and muscularity, far surpassing in these respects any other water bird with which I am acquainted. To all these is added a vast expansion of wing, to enable the bird to sail with sufficient celerity while dipping in the water. The general proportion of the length of our swiftest Hawks and Swallows, to their breadth, is as one to two; but in the present case, as there is not only the resistance of the air, but also that of the water to overcome, a still greater volume of wing is given, the Sheerwater measuring nineteen inches in length, and upwards of forty-four in extent. In

short, whoever has attentively examined this curious apparatus, and observed the possessor with his ample wings, long bending neck, and lower mandible occasionally dipt into and ploughing the surface, and the facility with which he procures his food, cannot but consider it a mere playful amusement when compared with the dashing immersions of the Tern, the Gull, or the Fish-Hawk, who, to the superficial observer, appear so superiorly accommodated.

The Sheerwater is most frequently seen skimming close along shore about the first of the flood, at which time the young fry, shrimp, &c., are most abundant in such places. There are also numerous inlets among the low islands between the sea beach and main land of Cape May, where I have observed the Sheerwaters, eight or ten in company, passing and repassing at highwater particular estuaries of those creeks that run up into the salt marshes, dipping, with extended neck, their open bills into the water, with as much apparent ease as Swallows glean up flies from the surface. On examining the stomachs of several of these, shot at the time, they contained numbers of a small fish, usually called *silver-sides*, from a broad line of a glossy silver color that runs from the gills to the tail. The mouths of these inlets abound with this fry, or fish, probably feeding on the various matters washed down from the marshes.

The voice of the Sheerwater is harsh and screaming, resembling that of the Tern, but stronger. It flies with a slowly flapping flight, dipping occasionally, with steady expanded wings and bended neck, its lower mandible into the sea, and with open mouth receiving its food as it ploughs along the surface. It is rarely seen swimming on the water; but frequently rests in large parties on the sand bars at low water. One of these birds which I wounded in the wing, and kept in the room beside me for several days, soon became tame and even familiar. It generally stood with its legs erect, its body horizontal, and its neck rather extended. It fre-

quently reposed on its belly, and stretching its neck, rested its long bill on the floor. It spent most of its time in this way, or in dressing and arranging its plumage with its long scissors-like bill, which it seemed to perform with great ease and dexterity. It refused every kind of food offered it, and I am persuaded never feeds but when on the wing. As to the reports of its frequenting oyster beds, and feeding on these fish, they are contradicted by all those persons with whom I have conversed, whose long residence on the coast where those birds are common, has given them the best opportunities of knowing.

The Sheerwater is nineteen inches in length, from the point of the bill to the extremity of the tail; the tips of the wings, when shut extend full four inches farther; breadth three feet eight inches; length of the lower mandible four inches and a half, of the upper three inches and a half, both of a scarlet red, tinged with orange, and ending in black; the lower extremely thin, the upper grooved so as to receive the edge of the lower; the nostril is large and pervious, placed in a hollow near the base and edge of the upper mandible, where it projects greatly over the lower; upper part of the head, neck, back and scapulars deep black; wings the same, except the secondaries, which are white on the inner vanes, and also tipped with white; tail forked, consisting of twelve feathers, the two middle ones about an inch and a half shorter than the exterior ones, all black, broadly edged on both sides with white; tail coverts white on the outer sides, black in the middle; front, passing down the neck below the eye, throat, breast and whole lower parts pure white; legs and webbed feet bright scarlet, formed almost exactly like those of the Tern. Weight twelve ounces avoirdupois. The female weighed nine ounces, and measured only sixteen inches in length, and three feet three inches in extent, the colors and markings were the same as those of the male, with the exception of the tail, which was white, shafted and broadly centered with black.

The birds from which these descriptions were taken were shot on the twenty-fifth of May, before they had begun to breed. The female contained a great number of eggs, the largest of which were about the size of duck-shot; the stomach, in both, was an oblong pouch, ending in a remarkably hard gizzard, curiously puckered or plaited, containing the half dissolved fragments of the small silver-sides, pieces of shrimps, small crabs, and skippers, or sand fleas.

On some particular parts of the coast of Virginia these birds are seen, on low sand bars, in flocks of several hundreds together. There more than twenty nests have been found within the space of a square rod. The young are at first so exactly of a color with the sand on which they sit, as to be with difficulty discovered unless after a close search.

The Sheerwater leaves our shores soon after his young are fit for the journey. He is found on various coasts of Asia, as well as America, residing principally near the tropics; and migrating into the temperate regions of the globe only for the purpose of rearing his young. He is rarely or never seen far out at sea; and must not be mistaken for another bird of the same name, a species of Petrel,* which is met with on every part of the ocean, skimming with bended wings along the summits, declivities and hollows of the waves.

* *Procellaria Puffinus*, the Sheerwater Petrel.

STORMY PETREL.

PROCELLARIA PELAGICA.

[Plate LX.—Fig. 6.]

Arct. Zool. No. 464.—*Le Petrel; ou l'Oiseau tempeste, Pl. Enl. 993.*—BEWICK, II, 223.—PEALE'S *Museum*, No. 3034.

THERE are few persons who have crossed the Atlantic, or traversed much of the ocean, who have not observed these solitary wanderers of the deep, skimming along the surface of the wild and wasteful ocean; flitting past the vessel like Swallows, or following in her wake, gleaning their scanty pittance of food from the rough and whirling surges. Habited in mourning, and making their appearance generally in greater numbers previous to or during a storm, they have long been fearfully regarded by the ignorant and superstitious, not only as the foreboding messengers of tempests and dangers to the hapless mariner; but as wicked agents, connected, some how or other, in creating them. "Nobody," say they, "can tell any thing of where they come from, or how they breed, though (as sailors sometimes say) it is supposed that they hatch their eggs under their wings as they sit on the water." This mysterious uncertainty of their origin and the circumstances above recited, have doubtless given rise to the opinion so prevalent among this class of men, that they are in some way or other connected with that personage who has been styled the prince of the Power of the Air. In every country where they are known, their names have borne some affinity to this belief. They have been called *Witches*;^{*} *Stormy Petrels*; the *Devil's Birds*; *Mother*

* *Arct. Zool. p. 464.*

Carey's Chickens,* probably from some celebrated ideal hag of that name; and their unexpected and numerous appearance has frequently thrown a momentary damp over the mind of the hardiest seaman.

It is the business of the naturalist, and the glory of philosophy, to examine into the reality of these things; to dissipate the clouds of error and superstition wherever they begin to darken and bewilder the human understanding; and to illustrate Nature with the radiance of truth. With these objects in view, we shall now proceed, as far as the few facts we possess will permit, in our examination into the history of this celebrated species.

The *Stormy Petrel*, the least of the whole twenty-four species of its tribe enumerated by ornithologists, and the smallest of all palmated fowls, is found over the whole Atlantic ocean, from Europe to North America, at all distances from land, and in all weathers; but is particularly numerous near vessels immediately preceding and during a gale, when flocks of them crowd in her wake, seeming then more than usually active in picking up various matters from the surface of the water. This presentiment of a change of weather is not peculiar to the Petrel alone; but is noted in many others, and common to all, even to those long domesticated. The Woodpeckers, the Snow-birds, the Swallows, are all observed to be uncommonly busy before a storm, searching for food with great eagerness, as if anxious to provide for the privations of the coming tempest. The common Ducks and the Geese are infallibly noisy and tumultuous before falling weather; and tho, with these, the attention of man renders any extra exertions for food at such times unnecessary, yet they wash, oil, dress and arrange their plumage with uncommon diligence and activity. The intelligent and observing farmer remarks this bustle, and wisely prepares for the is-

* This name seems to have been originally given them by captain Carteret's sailors, who met with these birds on the coast of Chili. See Hawkesworth's *Voyages*, vol. i, p. 203.

sue; but he is not so ridiculously absurd as to suppose, that the storm which follows is produced by the agency of these feeble creatures, who are themselves equal sufferers by its effects with man. He looks on them rather as useful monitors, who from the delicacy of their organs, and a perception superior to his own, point out the change in the atmosphere before it has become sensible to his grosser feelings; and thus, in a certain degree, contribute to his security. And why should not those who navigate the ocean contemplate the appearance of this unoffending little bird in like manner, instead of eyeing it with hatred and execration? As well might they curse the midnight light-house, that, star-like, guides them on their watery way, or the buoy, that warns them of the sunken rocks below, as this harmless wanderer, whose manner informs them of the approach of the storm, and thereby enables them to prepare for it.

The Stormy Petrels, or Mother Carey's Chickens, breed in great numbers on the rocky shores of the Bahama and the Bermuda islands, and in some places on the coast of East Florida and Cuba. They breed in communities like the Bank Swallows, making their nests in the holes and cavities of the rocks above the sea, returning to feed their young only during the night, with the superabundant oily food from their stomachs. At these times they may be heard making a continued clattering sound like frogs during the whole night. In the day they are silent, and wander widely over the ocean. This easily accounts for the vast distance they are sometimes seen from land, even in the breeding season. The rapidity of their flight is at least equal to the fleetness of our Swallows. Calculating this at the rate of one mile per minute, twelve hours would be sufficient to waft them a distance of seven hundred and twenty miles; but it is probable that the far greater part confine themselves much nearer land during that interesting period.

In the month of July, while on a voyage from New Orleans to New York, I saw few or none of these birds in the gulf of Mexi-

co, although our ship was detained there by calms for twenty days, and carried by currents as far south as cape Antonio, the westernmost extremity of Cuba. On entering the gulf stream, and passing along the coasts of Florida and the Carolinas, these birds made their appearance in great numbers, and in all weathers; contributing much by their sprightly evolutions of wing to enliven the scene; and affording me every day several hours of amusement. It is indeed an interesting sight to observe these little birds in a gale, coursing over the waves, down the declivities, up the ascents of the foaming surf that threatens to burst over their heads; sweeping along the hollow troughs of the sea as in a sheltered valley, and again mounting with the rising billow, and just above its surface, occasionally dropping its feet, which, striking the water, throws it up again with additional force; sometimes leaping, with both legs parallel, on the surface of the roughest waves for several yards at a time. Meanwhile it continues coursing from side to side of the ship's wake, making excursions far and wide, to the right and to the left, now a great way ahead, and now shooting astern for several hundred yards, returning again to the ship as if she were all the while stationary, tho perhaps running at the rate of ten knots an hour! But the most singular peculiarity of this bird is its faculty of standing and even running on the surface of the water, which it performs with apparent facility. When any greasy matter is thrown overboard, these birds instantly collect around it, and facing to windward, with their long wings expanded, and their webbed feet patting the water, the lightness of their bodies and the action of the wind on their wings enable them to do this with ease. In calm weather they perform the same manœuvre by keeping their wings just so much in action as to prevent their feet from sinking below the surface. According to Buffon,* it is from this singular habit that the whole genus have obtained the

* Buffon, tome xxiii, p. 299.

name Petrel, from the apostle Peter, who, as Scripture informs us, also walked on the water.

As these birds often come up immediately under the stern, one can examine their form and plumage with nearly as much accuracy as if they were in the hand. They fly with the wings forming an almost straight horizontal line with the body, the legs extended behind, and the feet partly seen stretching beyond the tail. Their common note of "*weet, weet,*" is scarcely louder than that of a young Duck of a week old, and much resembling it. During the whole of a dark, wet and boisterous night which I spent on deck, they flew about the after rigging, making a singular hoarse chattering, which in sound resembled the syllables *patrèt tu cuk cuk tu tu*, laying the accent strongly on the second syllable *tret*. Now and then I conjectured that they alighted on the rigging, making then a lower curring noise.

Notwithstanding the superstitious fears of the seamen, who dreaded the vengeance of the survivors, I shot fourteen of these birds one calm day in lat. 33°, eighty or ninety miles off the coast of Carolina, and had the boat lowered to pick them up. These I examined with considerable attention, and found the most perfect specimens as follow.

Length six inches and three quarters, extent thirteen inches and a half; bill black, nostrils united in a tubular projection, the upper mandible grooved from thence, and overhanging the lower like that of a bird of prey; head, back and lower parts brown sooty black; greater wing coverts pale brown, minutely tipped with white; sides of the vent and whole tail coverts pure white; wings and tail deep black, the latter nearly even at the tip, or very slightly forked; in some specimens two or three of the exterior tail feathers were white for an inch or so at the root; legs and naked part of the thighs black; feet webbed, with the slight rudiments of a hind toe; the membrane of the foot is marked with a spot of straw yel-

low, and finely serrated along the edges; eyes black. Male and female differing nothing in color.

On opening these I found the first stomach large, containing numerous round semitransparent substances of an amber color, which I at first suspected to be the spawn of some fish; but on a more close and careful inspection, they proved to be a vegetable substance, evidently the seeds of some marine plant, and about as large as mustard seed. The stomach of one contained a fish, half digested, so large that I should have supposed it too bulky for the bird to swallow; another was filled with the tallow which I had thrown overboard; and all had quantities of the seeds already mentioned both in their stomachs and gizzards; in the latter were also numerous minute pieces of barnacle shells. On a comparison of the seeds above mentioned with those of the *gulf-weed*, so common and abundant in this part of the ocean, they were found to be the same. Thus it appears, that these seeds floating perhaps a little below the surface, and the barnacles with which ships' bottoms usually abound, being both occasionally thrown up to the surface by the action of the vessel through the water in blowing weather, entice these birds to follow in the ship's wake at such times, and not, as some have imagined, merely to seek shelter from the storm, the greatest violence of which they seem to disregard. There is also the greasy dish washings, and other oily substances thrown over by the cook, on which they feed with avidity; but with great good nature, their manners being so gentle, that I never observed the slightest appearance of quarrelling or dispute among them.

One circumstance is worthy of being noticed, and shows the vast range they take over the ocean. In firing at these birds a quill feather was broken in each wing of an individual, and hung fluttering in the wind, which rendered it so conspicuous among the rest as to be known to all on board. This bird, notwithstanding its inconvenience, continued with us for nearly a week, during which

we sailed a distance of more than four hundred miles to the north. Flocks continued to follow us until near Sandy Hook.

The length of time these birds remain on wing is no less surprising. As soon as it was light enough in the morning to perceive them, they were found roaming about as usual; and I have often sat in the evening, in the boat which was suspended by the ship's stern, watching their movements, until it was so dark that the eye could no longer follow them, tho I could still hear their low note of *weet weet*, as they approached near to the vessel below me.

These birds are sometimes driven by violent storms to a considerable distance inland. One was shot some years ago on the river Schuylkill near Philadelphia; and Bewick mentions their being found in various quarters of the interior of England. From the nature of their food their flesh is rank and disagreeable; tho they sometimes become so fat, that, as Mr. Pennant, on the authority of Brunnich, asserts "the inhabitants of the Feroe isles make them serve the purposes of a candle, by drawing a wick through the mouth and rump, which being lighted, the flame is fed by the fat and oil of the body."*

* Brit. Zool. vol. ii, p. 434.



Drawn from Nature by A. Wilson.

Engraved by J. G. Marnick.

1. Green Heron. 2. Night H. 3. Young. 4. Great White H.

GREEN HERON.

ARDEA VIRESCENS.

[Plate LXI.—Fig. 1.]

Arct. Zool. No. 349.—CATESBY, I, 80.—*Le Crabier vert*, BUFF. VII, 404.—LATH. *Syn. v. 3, p. 68*,
No. 30.—PEALE'S *Museum*, No. 3797.

THIS common and familiar species owes little to the liberality of public opinion, whose prejudices have stigmatized it with a very vulgar and indelicate nickname; and treat it on all occasions as worthless and contemptible. Yet few birds are more independent of man than this; for it fares best, and is always most numerous, where cultivation is least known or attended to; its favorite residence being the watery solitudes of swamps, pools and morasses, where millions of frogs and lizards “tune their nocturnal notes” in full chorus, undisturbed by the lords of creation.

The Green Bittern makes its first appearance in Pennsylvania early in April, soon after the marshes are completely thawed. There, among the stagnant ditches with which they are intersected, and amidst the bogs and quagmires, he hunts with great cunning and dexterity. Frogs and small fish are his principal game, whose caution, and facility of escape, require nice address, and rapidity of attack. When on the look-out for small fish, he stands in the water, by the side of the ditch, silent and motionless as a statue; his neck drawn in over his breast, ready for action. The instant a fry or minnow comes within the range of his bill, by a stroke quick and sure as that of the rattle-snake, he seizes his prey, and swallows it in an instant. He searches for small crabs, and for the various worms and larvæ, particularly those of the dragon-fly, which lurk in the mud, with equal adroit-

ness. But the capturing of frogs requires much nicer management. These wary reptiles shrink into the mire on the least alarm, and do not raise up their heads again to the surface without the most cautious circumspection. The Bittern, fixing his penetrating eye on the spot where they disappeared, approaches with slow stealing step, laying his feet so gently and silently on the ground as not to be heard or felt; and when arrived within reach stands fixed, and bending forwards, until the first glimpse of the frog's head makes its appearance, when, with a stroke instantaneous as lightning, he seizes it in his bill, beats it to death, and feasts on it at his leisure.

This mode of life, requiring little fatigue where game is so plenty, as is generally the case in all our marshes, must be particularly pleasing to the bird; and also very interesting, from the continual exercise of cunning and ingenuity necessary to circumvent its prey. Some of the naturalists of Europe, however, in their superior wisdom, think very differently; and one can scarcely refrain from smiling at the absurdity of those writers, who declare, that the lives of this whole class of birds are rendered miserable by toil and hunger; their very appearance, according to Buffon, presenting the image of suffering anxiety and indigence.*

When alarmed, the Green Bittern rises with a hollow guttural scream; does not fly far, but usually alights on some old stump, tree or fence adjoining, and looks about with extended neck; tho sometimes this is drawn in so that his head seems to rest on his breast. As he walks along the fence, or stands gazing at you with outstretched neck, he has the frequent habit of jetting the tail. He sometimes flies high, with doubled neck, and legs extended behind, flapping the wings smartly, and travelling with great expedition. He is the least shy of all our Herons; and perhaps the most numerous and generally dispersed; being found far in the interior as

* Hist. Nat. des Oiseau, tome xxii, p. 343.

well as along our salt marshes; and every where about the muddy shores of our mill ponds, creeks and large rivers.

The Green Bittern begins to build about the twentieth of April; sometimes in single pairs in swampy woods; often in companies; and not unfrequently in a kind of association with the *Qua-birds*, or Night Herons. The nest is fixed among the branches of the trees; is constructed wholly of small sticks, lined with finer twigs, and is of considerable size, tho loosely put together. The female lays four eggs, of the common oblong form, and of a pale light blue color. The young do not leave the nest until able to fly; and for the first season, at least, are destitute of the long-pointed plumage on the back; the lower parts are also lighter, and the white on the throat broader. During the whole summer, and until late in autumn, these birds are seen in our meadows and marshes, but never remain during winter in any part of the United States.

The Green Bittern is eighteen inches long, and twenty-five inches in extent; bill black, lighter below, and yellow at the base; chin and narrow streak down the throat yellowish white; neck dark vinaceous red; back covered with very long tapering pointed feathers, of a hoary green shafted with white, on a dark green ground; the hind part of the neck is destitute of plumage that it may be the more conveniently drawn in over the breast, but is covered with the long feathers of the throat and sides of the neck that enclose it behind; wings and tail dark glossy green, tip and bordered with yellowish white; legs and feet yellow, tinged before with green, the skin of these thick and moveable; belly ashy brown; irides bright orange; crested head very dark glossy green. The female, as I have particularly observed in numerous instances, differs in nothing as to color from the male; neither of them receive the long feathers on the back during the first season.

There is one circumstance attending this bird which, I recollect, at first surprised me. On shooting and wounding one, I car-

ried it some distance by the legs, which were at first yellow; but on reaching home, I perceived to my surprise that they were red. On letting the bird remain some time undisturbed, they again became yellow, and I then discovered that the action of the hand had brought a flow of blood into them and produced the change of color. I have remarked the same in those of the Night Heron.

NIGHT HERON, OR QUA-BIRD.

ARDEA NYCTICORAX.

[Plate LXI.—Fig. 2.]

*Arct. Zool. No. 356.—Le Bihoreau, BUFF. VII, 435. 439, tab. 22. Pl. Enl. 758, 759. 899.—LATH.**Syn. v. 3. p. 52. No. 13,—p. 53, Young, called there the Female.—PEALE'S Museum, No. 3728,—**Young, No. 3729.*

THIS species, tho common to both continents, and known in Europe for many centuries, has been so erroneously described by all the European naturalists whose works I have examined, as to require more than common notice in this place. For this purpose, an accurate figure of the male is given, and also another of what has till now been universally considered the female, with a detail of so much of their history as I am personally acquainted with.

The Night Heron arrives in Pennsylvania early in April, and immediately takes possession of his former breeding place, which is usually the most solitary and deeply shaded part of a cedar swamp. Groves of swamp oak, in retired and inundated places, are also sometimes chosen, and the males not unfrequently select tall woods, on the banks of the river, to roost in during the day. These last regularly direct their course, about the beginning of evening twilight, towards the marshes, uttering in a hoarse and hollow tone the sound *Qua*, which by some has been compared to that produced by the retchings of a person attempting to vomit. At this hour also all the nurseries in the swamps are emptied of their inhabitants, who disperse about the marshes, and along the ditches and river shore, in quest of food. Some of these breeding places have been occupied every spring and summer for time im-

memorial, by from eighty to one hundred pair of Qua-birds. In places where the cedars have been cut down for sale, the birds have merely removed to another quarter of the swamp; but when personally attacked, long teased and plundered, they have been known to remove from an ancient breeding place, in a body, no one knew where. Such was the case with one on the Delaware, near Thompson's point, ten or twelve miles below Philadelphia; which having been repeatedly attacked and plundered by a body of Crows, after many severe rencontres the Herons finally abandoned the place. Several of these breeding places occur among the red cedars on the sea beach of Cape May, intermixed with those of the Little Egret, Green Bittern, and Blue Heron. The nests are built entirely of sticks, in considerable quantities, with frequently three and four nests on the same tree. The eggs are generally four in number, measuring two inches and a quarter in length, by one and three quarters in thickness, and of a very pale light blue color. The ground or marsh below is bespattered with their excrements lying all around like whitewash, with feathers, broken egg shells, old nests, and frequently small fish, which they have dropt by accident and neglected to pick up.

On entering the swamp in the neighbourhood of one of these breeding places, the noise of the old and the young would almost induce one to suppose that two or three hundred Indians were choking or throttling each other. The instant an intruder is discovered, the whole rise in the air in silence, and remove to the tops of the trees in another part of the woods; while parties of from eight to ten make occasional circuits over the spot to see what is going on. When the young are able they climb to the highest part of the trees; but, knowing their inability, do not attempt to fly. Tho it is probable that these nocturnal birds do not see well during the day, yet their faculty of hearing must be exquisite, as it is almost impossible, with all the precautions one can use, to penetrate near their residence without being discovered. Several species of Hawks

hover around, making an occasional sweep among the young; and the Bald Eagle himself has been seen reconnoitring near the spot, probably with the same design.

Contrary to the generally received opinion, the males and females of these birds are so alike in color as scarcely to be distinguished from each other; both have also the long slender plumes that flow from the head. These facts I have exhibited by dissection on several subjects, to different literary gentlemen of my acquaintance, particularly to my venerable friend Mr. William Bartram, to whom I have also often shewn the young, represented at fig. 3. One of these last, which was kept for some time in the botanic garden of that gentleman, by its voice instantly betrayed its origin, to the satisfaction of all who examined it. These young certainly receive their full colored plumage before the succeeding spring, as on their first arrival no birds are to be seen in the dress of fig. 3, but soon after they have bred these become more numerous than the others. Early in October they migrate to the south. According to Buffon, these birds also inhabit Cayenne; and are found widely dispersed over Europe, Asia, and America. The European species, however, is certainly much smaller than the American; tho, in other respects, corresponding exactly to it. Among a great number which I examined with attention, the following description was carefully taken from a common sized full grown male.

Length of the Night Heron two feet four inches, extent four feet; bill black, four inches and a quarter long from the corners of the mouth to the tip; lores, or space between the eye and bill, a bare bluish white skin; eyelids also large and bare, of a deep purple blue; eye three quarters of an inch in diameter, the iris of a brilliant blood red, pupil black; crested crown and hind head deep dark blue, glossed with green; front and line over the eye white; from the hind head proceed three very narrow white tapering feathers, between eight and nine inches in length; the vanes of these

are concave below, the upper one enclosing the next, and that again the lower; tho separated by the hand, if the plumage be again shook several times, these long flowing plumes gradually enclose each other, appearing as one; these the bird has the habit of erecting when angry or alarmed: the cheeks, neck and whole lower parts are white, tintured with yellowish cream, and under the wings with very pale ash; back and scapulars of the same deep dark blue, glossed with green, as that of the crown; rump and tail coverts, as well as the whole wings and tail, very pale ash; legs and feet a pale yellow cream color; inside of the middle claw serrated.

The female differed in nothing as to plumage from the male, but in the wings being of rather a deeper ash; having not only the dark deep green-blue crown and back, but also the long pendent white plumes from the hind head. Each of the females contained a large cluster of eggs of various sizes.

The young (fig. 3.) was shot soon after it had left the nest, and differed very little from those which had been taken from the trees, except in being somewhat larger. This measured twenty-one inches in length, and three feet in extent; the general color above a very deep brown, streaked with reddish white, the spots of white on the back and wings being triangular, from the center of the feather to the tip; quills deep dusky, marked on the tips with a spot of white; eye vivid orange; belly white, streaked with dusky, the feathers being pale dusky, streaked down their centers with white; legs and feet light green; inside of the middle claw slightly pectinated; body and wings exceedingly thin and limber; the down still stuck in slight tufts to the tips of some of the feathers.

These birds also breed in great numbers in the neighbourhood of New Orleans; for being in that city in the month of June, I frequently observed the Indians sitting in market with the dead and living young birds for sale; also numbers of Grey Owls (*Strix*

nebulosa), and the White Ibis (*Tantalus albus*), for which nice dainties I observed they generally found purchasers.

The food of the Night Heron, or Qua-bird, is chiefly composed of small fish, which it takes by night. Those that I opened had a large expansion of the gullet immediately under the bill, that narrowed from thence to the stomach, which is a large oblong pouch, and was filled with fish. The teeth of the pectinated claw were thirty-five or forty in number, and as they contained particles of the down of the bird, shewed evidently from this circumstance that they act the part of a comb, to rid the bird of vermin in those parts which it cannot reach with its bill.

GREAT WHITE HERON.

ARDEA EGRETTA.

[Plate LXI.—Fig. 4.]

PEALE'S *Museum*, No. 3754; Young, 3755.

THIS tall and elegant bird, tho often seen, during the summer, in our low marshes and inundated meadows; yet on account of its extreme vigilance and watchful timidity, is very difficult to be procured. Its principal residence is in the regions of the south, being found from Guiana, and probably beyond the line, to New York. It enters the territories of the United States late in February; this I conjecture from having first met with it in the southern parts of Georgia about that time. The high inland parts of the country it rarely or never visits; its favourite haunts are vast inundated swamps, rice fields, the low marshy shores of rivers, and such like places; where, from its size and color, it is very conspicuous even at a great distance.

The appearance of this bird, during the first season, when it is entirely destitute of the long flowing plumes of the back, is so different from the same bird in its perfect plumage, which it obtains in the third year, that naturalists and others very generally consider them as two distinct species. The opportunities which I have fortunately had, of observing them with the train in various stages of its progress, from its first appearance to its full growth, satisfies me that the Great White Heron with, and that without the long plumes, are one and the same species, in different periods of age. In the museum of my friend Mr. Peale, there is a specimen of this bird, in which the train is wanting; but on a closer exami-

nation, its rudiments are plainly to be perceived, extending several inches beyond the common plumage.

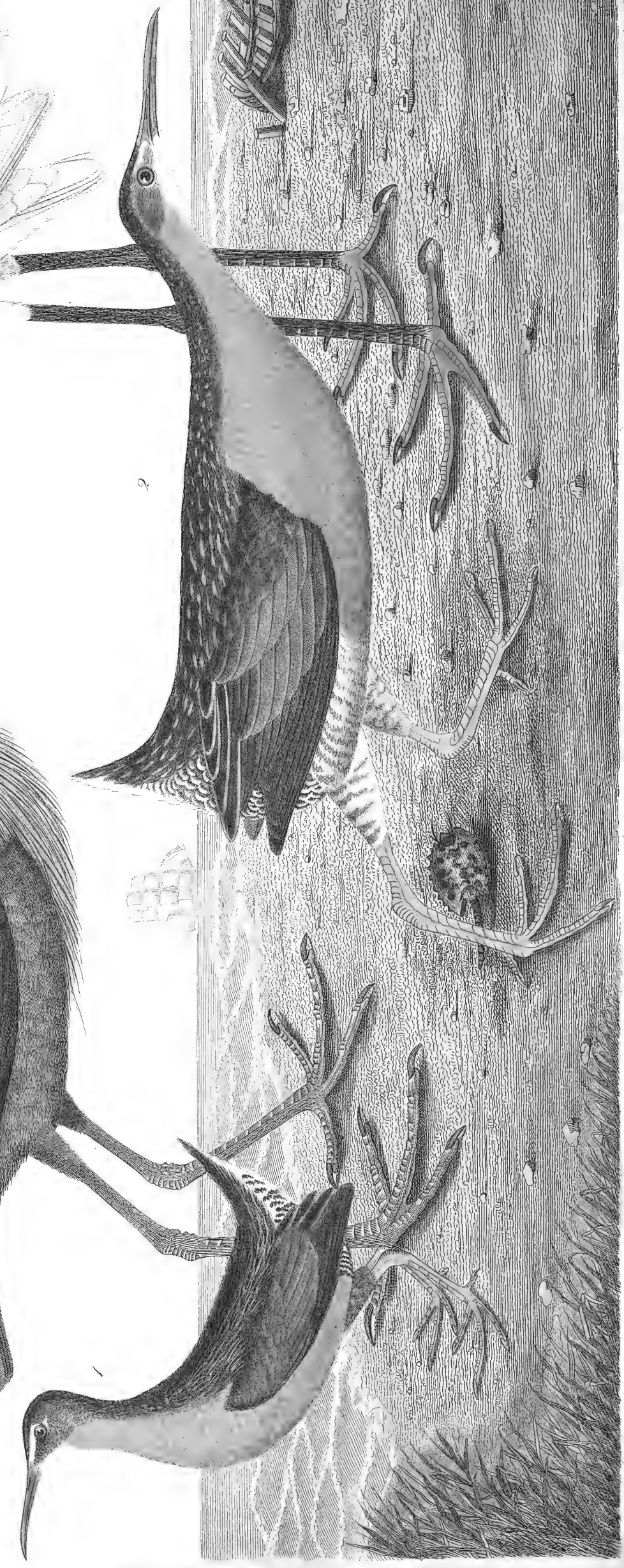
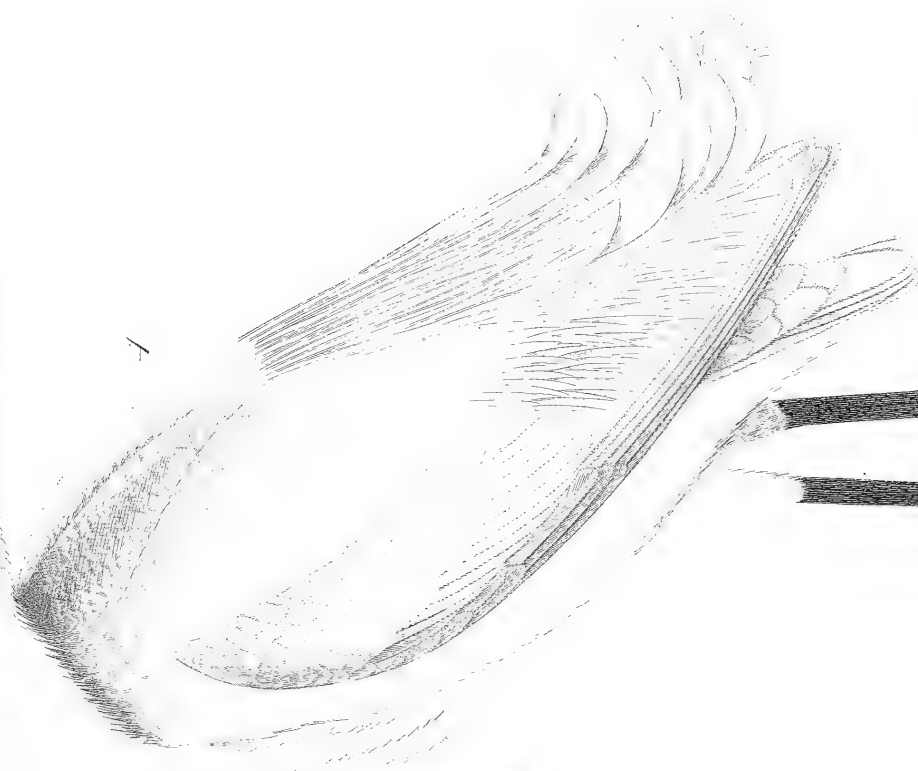
The Great White Heron breeds in several of the extensive cedar swamps in the lower parts of New Jersey. Their nests are built on the trees, in societies; the structure and materials exactly similar to those of the Snowy Heron, but larger. The eggs are usually four, of a pale blue color. In the months of July and August the young make their first appearance in the meadows and marshes, in parties of twenty or thirty together. The large ditches with which the extensive meadows below Philadelphia are intersected, are regularly, about that season, visited by flocks of those birds; these are frequently shot; but the old ones are too sagacious to be easily approached. Their food consists of frogs, lizards, small fish, insects, seeds of the splatter dock (a species of *nymphæ*) and small water snakes. They will also devour mice and moles, the remains of such having been at different times found in their stomachs.

The long plumes of these birds have at various periods been in great request, on the continent of Europe, particularly in France and Italy, for the purpose of ornamenting the female head dress. When dyed of various colors, and tastefully fashioned, they form a light and elegant duster and mosquito brush. The Indians prize them for ornamenting their hair, or top-knot; and I have occasionally observed these people wandering through the marketplace of New Orleans with bunches of those feathers for sale.

The Great White Heron measures five feet from the extremities of the wings, and three feet six inches from the tip of the bill to the end of the tail; the train extends seven or eight inches farther. This train is composed of a great number of long, thick, tapering shafts, arising from the lower part of the shoulders, and thinly furnished on each side with fine flowing hair-like threads, of several inches in length, covering the lower part of the back, and falling gracefully over the tail, which it entirely conceals. The

whole plumage is of a snowy whiteness, except the train, which is slightly tinged with yellow. The bill is nearly six inches in length, of a rich orange yellow, tipped with black; irides a paler orange, pupil small, giving the bird a sharp and piercing aspect; the legs are long, stout, and of a black color, as is the bare space of four inches above the knee; the span of the foot measures upwards of six inches; the inner edge of the middle claw is pectinated; the exterior and middle toes are united at the base for about half an inch, by a membrane.

The articulations of the vertebræ are remarkably long; the intestines measure upwards of eight feet, and are very narrow. The male and female are alike in plumage; both, when of full age, having the train equally long.



VIRGINIAN RAIL.

RALLUS VIRGINIANUS.

[Plate LXII.—Fig. 1.]

Arct. Zool. No. 408.—EDW. 279.—LATH. *Syn. v. 3, p. 228, No. 1, —var. A.*—PEALE'S *Museum*,
No. 4426.

THIS species very much resembles the European Water Rail, (*Rallus aquaticus*) but is smaller, and has none of the slate or lead color on the breast which marks that of the old continent; its toes are also more than proportionably shorter, which, with a few other peculiarities, distinguish the species. It is far less numerous in this part of the United States than our common Rail, and, as I apprehend, inhabits more remote northern regions. It is frequently seen along the borders of our salt marshes, which the other rarely visits; and also breeds there, as well as among the meadows that border our large rivers. It spreads over the interior as far west as the Ohio, having myself shot it in the barrens of Kentucky, early in May. The people there observe them in wet places, in the groves, only in spring. It feeds less on vegetable and more on animal food than the common Rail. During the months of September and October, when the reeds and wild oats swarm with the latter species, feeding on their nutritious seeds, a few of the present kind are occasionally found; but not one for five hundred of the others. The food of the present species consists of small snail shells, worms, and the larvæ of insects, which it extracts from the mud; hence the cause of its greater length of bill, to enable it the more readily to reach its food. On this account also, its flesh is much inferior to that of the other. In most of its habits, its thin compressed form of body, its aversion to take wing, and the dex-

terity with which it runs or conceals itself among the grass and sedge, are exactly similar to those of the common Rail, from which genus, notwithstanding the difference of its bill, it ought not to be separated.

This bird is known to some of the inhabitants along the sea coast of New Jersey, by the name of the Fresh-water *Mud Hen*, this last being the common appellation of the Clapper Rail, which the present species resembles in every thing but size. The epithet Fresh-water, is given it because of its frequenting those parts of the marsh only where fresh water springs rise through the bogs into the salt marshes. In these places it usually constructs its nest, one of which, through the active exertions of my friend Mr. Ord, while traversing with me the salt marshes of Cape May, we had the good fortune to discover. It was built in the bottom of a tuft of grass, in the midst of an almost impenetrable quagmire, and was composed altogether of old wet grass and rushes. The eggs had been floated out of the nest by the extraordinary rise of the tide in a violent north-east storm, and lay scattered about among the drift weed. The female, however, still lingered near the spot, to which she was so attached as to suffer herself to be taken by hand. She doubtless intended to repair her nest, and commence laying anew; as during the few hours that she was in our possession she laid one egg, corresponding in all respects with the others. On examining those floated out of the nest they contained young, perfectly formed, but dead. The usual number of eggs is from six to ten. They are shaped like those of the domestic hen, measuring one inch and two-tenths long, by very nearly half an inch in width, and are of a dirty white or pale cream color, sprinkled with specks of reddish and pale purple, most numerous near the great end. They commence laying early in May, and probably raise two brood in the season. I suspect this from the circumstance of Mr. Ord having, late in the month of July, brought me several young ones of only a few days old, which were caught

among the grass near the border of the Delaware. The parent Rail, shewed great solicitude for their safety. They were wholly black, except a white spot on the bill; were covered with a fine down, and had a soft piping note. In the month of June of the same year, another pair of these birds began to breed amidst a boggy spring in one of Mr. Bartram's meadows; but were unfortunately destroyed.

The Virginian Rail is migratory, never wintering in the northern or middle states. It makes its first appearance in Pennsylvania early in May; and leaves the country on the first smart frosts, generally in November. I have no doubt but many of them linger in the low woods and marshes of the southern states during winter.

This species is ten inches long, and fourteen inches in extent; bill dusky red; cheeks and stripe over the eye ash, over the lores and at the lower eyelid white; iris of the eye red; crown and whole upper parts black, streaked with brown, the center of each feather being black; wing coverts hazel brown, inclining to chesnut; quills plain deep dusky; chin white; throat, breast and belly orange brown; sides and vent black, tipped with white; legs and feet dull red brown; edge of the bend of the wing white.

The female is about half an inch shorter, and differs from the male in having the breast much paler; not of so bright a reddish brown; there is also more white on the chin and throat.

When seen, which is very rarely, these birds stand or run with the tail erect, which they frequently jerk upwards. They fly with the legs hanging, generally but a short distance; and the moment they alight run off with great speed.

CLAPPER RAIL.

RALLUS CREPITANS.

[Plate LXII.—Fig. 2.]

Arch. Zool. No. 407.—*TURT. Syst. p. 430.*—*LATH. Syn. v. 3, p. 229, No. 2.*—*PEALE'S Museum, No. 4400.*

THIS is a very numerous and well known species, inhabiting our whole Atlantic coast from New England to Florida. It is designated by different names, such as the Mud Hen, Clapper Rail, Meadow Clapper, Big Rail, &c. &c. Tho occasionally found along the swampy shores and tide waters of our large rivers, its principal residence is in the salt marshes. It is a bird of passage, arriving on the coast of New Jersey about the twentieth of April, and retiring again late in September. I suspect that many of them winter in the marshes of Georgia and Florida, having heard them very numerous at the mouth of Savannah river, in the month of February. Coasters and fishermen often hear them while on their migrations, in spring, generally a little before day break. The shores of New Jersey, within the beach, consisting of an immense extent of flat marsh, covered with a coarse reedy grass, and occasionally overflowed by the sea, by which it is also cut up into innumerable islands by narrow inlets, seem to be the favorite breeding place for these birds, as they are there acknowledged to be more than double in number to all other marsh fowl.

The Clapper Rail, or, as it is generally called, the Mud Hen, soon announces its arrival in the salt marshes, by its loud, harsh and incessant cackling, which very much resembles that of a Guinea fowl. This noise is most general during the night; and is said to be always greatest before a storm. About the twentieth

of May they generally commence laying and building at the same time; the first egg being usually dropt in a slight cavity, lined with a little dry grass pulled for the purpose, which, as the number of the eggs increase to their usual complement *ten*, is gradually added to, until it rises to the height of twelve inches or more, doubtless to secure it from the rising of the tides. Over this the long salt grass is artfully arched, and knit at top, to conceal it from the view above; but this very circumstance enables the experienced egg hunter to distinguish the spot at the distance of thirty or forty yards, tho imperceptible to a common eye. The eggs are of a pale clay color, sprinkled with small spots of dark red, and measure somewhat more than an inch and a half in length, by one inch in breadth, being rather obtuse at the small end. These eggs are exquisite eating, far surpassing those of the domestic hen. The height of laying is about the first of June, when the people of the neighbourhood go off to the marshes *an egging*, as it is called. So abundant are the nests of this species, and so dexterous some persons at finding them, that one hundred dozen of eggs have been collected by one man in a day. At this time the Crows, the minx, and the foxes, come in for their share; but not content with the eggs, those last often seize and devour the parents also. The bones, feathers, wings, &c. of the poor Mud Hen lie in heaps near the hole of the minx; by which circumstance, however, he himself is often detected and destroyed.

These birds are also subject to another calamity of a more extensive kind. After the greater part of the eggs are laid, there sometimes happen violent north-east tempests, that drive a great sea into the bay, covering the whole marshes; so that at such times the Rail may be seen in hundreds, floating over the marsh in great distress; many escape to the main land; and vast numbers perish. On an occasion of this kind I have seen, at one view, thousands in a single meadow, walking about exposed and bewildered, while the dead bodies of the females who had perished on or near their

nests, were strewed along the shore. This last circumstance proves how strong the ties of maternal affection is in these birds; for of the great numbers which I picked up and opened, not one male was to be found among them; all were females! Such as had not yet begun to sit probably escaped. These disasters do not prevent the survivors from recommencing the work of laying and building anew; and instances have occurred where their eggs have been twice destroyed by the sea; and yet in two weeks the eggs and nests seemed as numerous as ever.

The young of the Clapper Rail very much resemble those of the Virginian Rail, except in being larger. On the tenth of August I examined one of these young Clapper Rails, caught among the reeds in the Delaware, and apparently about three weeks old; it was covered with black down, with the exception of a spot of white on the auriculars, and a streak of the same along the side of the breast, belly, and fore part of the thigh; the legs were of a blackish slate color; and the bill was marked with a spot of white near the point, and round the nostril. These run with great facility among the grass and reeds, and are taken with extreme difficulty.

The whole defence of this species seems to be in the nervous vigour of its limbs, and thin compressed form of its body, by which it is enabled to pass between the stalks of grass and reeds with great rapidity. There is also every where among the salt marshes covered ways under the flat and matted grass, through which the Rail makes its way like a rat, without a possibility of being seen. There is generally one or more of these from its nest to the water edge, by which it may escape unseen; and sometimes, if closely pressed, it will dive to the other side of the pond, gut, or inlet, rising and disappearing again with the silence and celerity of thought. In smooth water it swims tolerably well, but not fast; sitting high in the water, with its neck erect, and striking with great rapidity. When on shore, it runs with the neck extended, the tail

erect, and frequently flitted up. On fair ground they run nearly as fast as a man; having myself, with great difficulty, caught some that were wing broken. They have also the faculty of remaining under water for several minutes, clinging close, head downwards, by the roots of the grass. In a long stretch they fly with great velocity, very much in the manner of a Duck, with extended neck, and generally low; but such is their aversion to take wing, that you may traverse the marshes where there are hundreds of these birds, without seeing one of them; nor will they flush until they have led the dog through numerous labyrinths, and he is on the very point of seizing them.

The food of the Clapper Rail consists of small shell fish, particularly those of the snail form, so abundant in the marshes; they also eat small crabs. Their flesh is dry, tastes sedgy, and will bear no comparison with that of the common Rail. Early in October they move off to the south; and tho, even in winter, a solitary instance of one may sometimes be seen, yet these are generally such as have been weak or wounded, and unable to perform the journey.

The Clapper Rail measures fourteen inches in length, and eighteen in extent; the bill is two inches and a quarter long, slightly bent, pointed, grooved, and of a reddish brown color; iris of the eye dark red; nostril oblong, pervious; crown, neck and back black, streaked with dingy brown; chin and line over the eye brownish white; auriculars dusky; neck before, and whole breast, of the same red brown as that of the preceding species; wing coverts dark chesnut; quill feathers plain dusky; legs reddish brown; flanks and vent black, tipped or barred with white. The males and females are nearly alike.

The young birds of the first year have the upper parts of an olive brown, streaked with pale slate; wings pale brown olive; chin and part of the throat white; breast ash color, tinged with brown; legs and feet a pale horn color. Mr. Pennant and several

other naturalists appear to have taken their descriptions from these imperfect specimens, the Clapper Rail being altogether unknown in Europe.

I have never met with any of these birds in the interior at a distance from lakes or rivers. I have also made diligent enquiry for them along the shores of lakes Champlain and Ontario, but without success.

BLUE CRANE, OR HERON.

ARDEA CÆRULEA.

[Plate LXII.—Fig. 3.]

Arct. Zool. No. 351.—CATESBY, I, 76.—*Le Crabier bleu*, BUFF. VII, 398.—SLOAN. *Jam. II*, 315.—
LATH. Syn. v. 3, p. 78, No. 45,—p. 79, var. A.—*Ardea cærulescens*, TURTON. *Syst. p. 379.*—PEALE'S
Museum, No. 3782.

IN mentioning this species in his translation of the *Systema Naturæ*, Turton has introduced what he calls two *varieties*, one from New Zealand, the other from Brazil; both of which, if we may judge by their size and color, appear to be entirely different and distinct species; the first being green with yellow legs, the last nearly one half less than the present. By this loose mode of discrimination, the precision of science being altogether dispensed with, the whole tribe of Cranes, Herons and Bitterns may be styled mere *varieties* of the genus *Ardea*. The same writer has still farther increased this confusion, by designating as a different species his *Bluish Heron* (*A. cærulescens*), which agrees almost exactly with the present. Some of these mistakes may probably have originated from the figure of this bird given by Catesby, which appears to have been drawn and colored, not from nature, but from the glimmering recollections of memory, and is extremely erroneous. These remarks are due to truth, and necessary to the elucidation of the history of this species, which seems to be but imperfectly known in Europe.

The Blue Heron is properly a native of the warmer climates of the United States, migrating from thence, at the approach of winter, to the tropical regions; being found in Cayenne, Jamaica, and Mexico. On the muddy shores of the Mississippi, from Baton

Rouge downwards to New Orleans, these birds are frequently met with. In spring they extend their migrations as far north as New England, chiefly in the vicinity of the sea; becoming more rare as they advance to the north. On the sea beach of Cape May I found a few of them breeding among the cedars, in company with the Snowy Heron, Night Heron, and Green Bittern. The figure and description of the present was taken from two of these, shot in the month of May, while in complete plumage. Their nests were composed of small sticks, built in the tops of the red cedars, and contained five eggs of a light blue color, and of somewhat a deeper tint than those of the Night Heron. Little or no difference could be perceived between the colors and markings of the male and female. This remark is applicable to almost the whole genus; tho from the circumstance of many of the yearling birds differing in plumage, they have been mistaken for females.

The Blue Heron, tho in the northern states it be found chiefly in the neighbourhood of the ocean, probably on account of the greater temperature of the climate, is yet particularly fond of fresh water bogs, on the edges of the salt marsh. These it often frequents, wading about in search of tadpoles, lizards, various larvæ of winged insects, and mud worms. It moves actively about in search of these, sometimes making a run at its prey; and is often seen in company with the Snowy Heron, figured in the same plate. Like this last, it is also very silent, intent and watchful.

The genus *Ardea* is the most numerous of all the wading tribes, there being no less than ninety-six different species enumerated by late writers. These are again subdivided into particular families, each distinguished by a certain peculiarity. The Cranes, by having the head bald; the Storks, with the orbits naked; and the Herons, with the middle claw pectinated. To this last belong the Bitterns. Several of these are nocturnal birds, feeding only as the evening twilight commences, and reposing either among the long grass and reeds, or on tall trees, in sequestered places, during

the day. What is very remarkable, those night wanderers often associate, during the breeding season, with the others; building their nests on the branches of the same tree; and, tho differing so little in external form, feeding on nearly the same food, living and lodging in the same place; yet preserve their race, language and manners as perfectly distinct from those of their neighbours, as if each inhabited a separate quarter of the globe.

The Blue Heron is twenty-three inches in length, and three feet in extent; the bill is black, but from the nostril to the eye, in both mandibles is of a rich light purplish blue; iris of the eye grey, pupil black, surrounded by a narrow silvery ring; eyelid light blue; the whole head, and greater part of the neck, is of a deep purplish brown; from the crested hind head shoot three narrow pointed feathers that reach nearly six inches beyond the eye; lower part of the neck, breast, belly and whole body a deep slate color, with lighter reflections; the back is covered with long, flat and narrow feathers, some of which are ten inches long and extend four inches beyond the tail; the breast is also ornamented with a number of these long slender feathers; legs blackish green; inner side of the middle claw pectinated. The breast and sides of the rump, under the plumage, are clothed with a mass of yellowish white unelastic cottony down, similar to that in most of the tribe, the uses of which are not altogether understood. Male and female alike in color.

The young birds of the first year are destitute of the purple plumage on the head and neck.

SNOWY HERON.*

ARDEA CANDIDISSIMA.

[Plate LXII.—Fig. 4.]

TURT. *Syst.* p. 380.—LATH. *Syn.* v. 3, p. 92, No. 61.—PEALE'S *Museum*, No. 3785.

THIS elegant species inhabits the sea coast of North America from the isthmus of Darien to the gulf of St. Lawrence, and is, in the United States, a bird of passage; arriving from the south early in April, and leaving the middle states again in October. Its general appearance, resembling so much that of the Little Egret of Europe, has, I doubt not, imposed on some of the naturalists of that country, as I confess it did on me.† From a more careful comparison however of both birds, I am satisfied that they are two entirely different and distinct species. These differences consist in the large flowing crest, yellow feet, and singularly curled plumes of the back of the present; it is also nearly double the size of the European species.

The Snowy Heron seems particularly fond of the salt marshes during summer; seldom penetrating far inland. Its white plumage renders it a very conspicuous object, either while on wing, or while wading the meadows or marshes. Its food consists of those small crabs usually called *fiddlers*, mud worms, snails, frogs and lizards. It also feeds on the seeds of some species of nymphæ, and of several other aquatic plants.

On the nineteenth of May I visited an extensive *breeding place* of the Snowy Heron, among the red cedars of Sommers's beach,

* Named in the plate, by mistake, the *Little Egret*.

† "On the American continent the Little Egret is met with at New York and Long island."
Lath. v. 3, p. 90.

on the coast of Cape May. The situation was very sequestered, bounded on the land side by a fresh water marsh or pond, and sheltered from the Atlantic by ranges of sand hills. The cedars, tho not high, were so closely crowded together as to render it difficult to penetrate through among them. Some trees contained three, others four nests, built wholly of sticks. Each had in it three eggs of a pale greenish blue color, and measuring an inch and three quarters in length, by an inch and a quarter in thickness. Forty or fifty of these eggs were cooked, and found to be well tasted; the white was of a bluish tint, and almost transparent, tho boiled for a considerable time; the yolk very small in quantity. The birds rose in vast numbers, but without clamour, alighting on the tops of the trees around, and watching the result in silent anxiety. Among them were numbers of the Night Heron, and two or three Purple-headed Herons. Great quantities of egg shells lay scattered under the trees, occasioned by the depredations of the Crows, who were continually hovering about the place. On one of the nests I found the dead body of the bird itself, half devoured by the Hawks, Crows, or Gulls. She had probably perished in defence of her eggs.

The Snowy Heron is seen at all times during summer among the salt marshes, watching and searching for food; or passing, sometimes in flocks, from one part of the bay to the other. They often make excursions up the rivers and inlets; but return regularly in the evening to the red cedars on the beach to roost. I found these birds on the Mississippi, early in June, as far up as Fort Adams, roaming about among the creeks and inundated woods.

The length of this species is two feet one inch; extent three feet two inches; the bill is four inches and a quarter long, and grooved; the space from the nostril to the eye orange yellow, the rest of the bill black; irides vivid orange; the whole plumage is of a snowy whiteness; the head is largely crested with loose un-

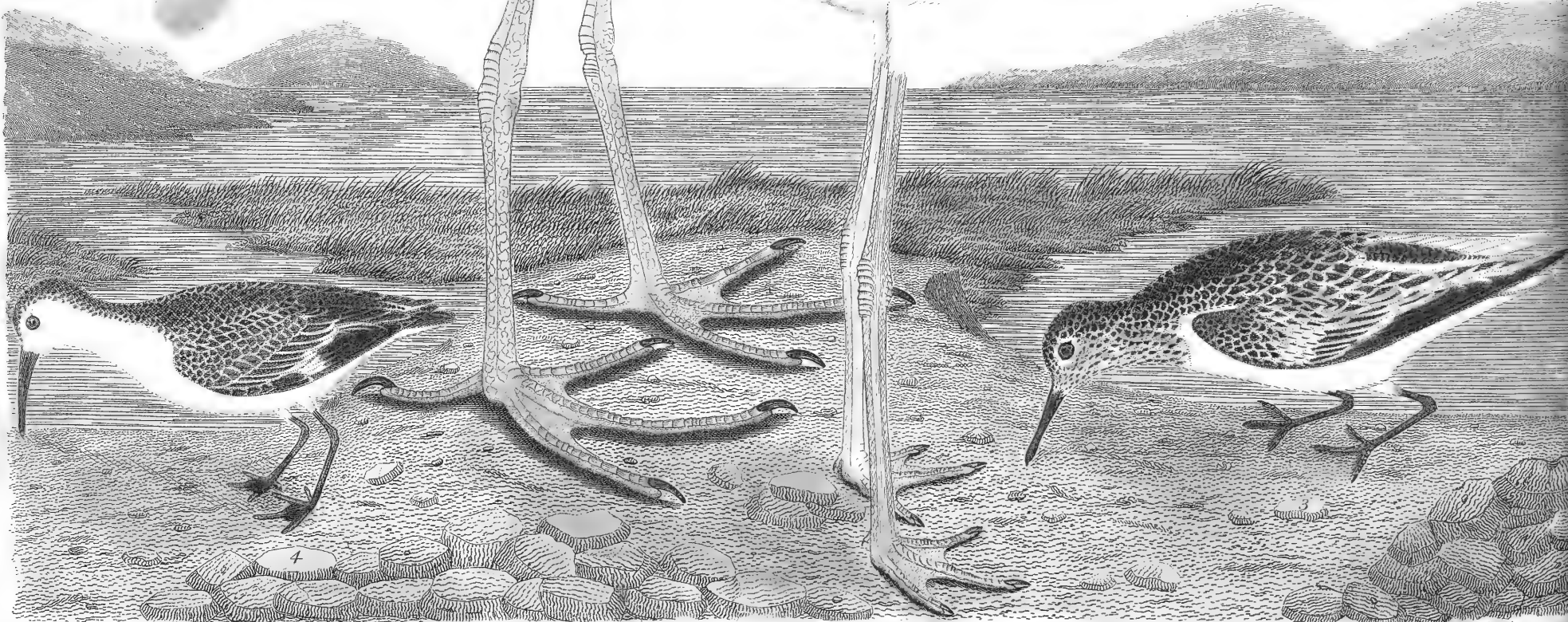
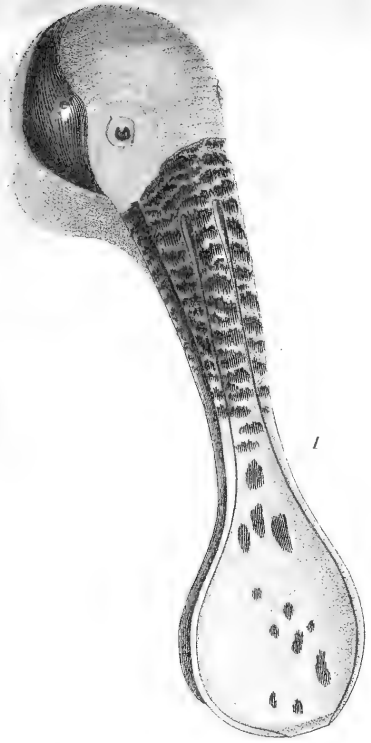
webbed feathers, nearly four inches in length; another tuft of the same covers the breast; but the most distinguished ornament of this bird is a bunch of long silky plumes, proceeding from the shoulders, covering the whole back, and extending beyond the tail, the shafts of these are six or seven inches long, extremely elastic, tapering to the extremities, and thinly set with long slender bending threads or fibres, easily agitated by the slightest motion of the air; these shafts curl upwards at the ends. When the bird is irritated, and erects those airy plumes, they have a very elegant appearance: the legs and naked part of the thighs are black; the feet bright yellow; claws black, the middle one pectinated.

The female can scarcely be distinguished by her plumage, having not only the crest, but all the ornaments of the male, tho not quite so long and flowing.

The young birds of the first season are entirely destitute of the long plumes of the breast and back; but, as all those that have been examined in spring are found crested and ornamented as above, they doubtless receive their full dress on the first moulting. Those shot in October measured twenty-two inches in length, by thirty-four in extent; the crest was beginning to form; the legs yellowish green, daubed with black; the feet greenish yellow; the lower mandible white at the base; the wings, when shut, nearly of a length with the tail, which is even at the end.

The Little Egret, or European species, is said by Latham and Turton to be nearly *a foot* in length; Bewick observes, that it rarely exceeds a foot and a half; has a much shorter crest, with *two* long feathers; the feet are black; and the long plumage of the back, instead of turning up at the extremity, falls over the rump.

The young of both these birds are generally very fat, and esteemed by some people as excellent eating.



ROSEATE SPOONBILL.

PLATALEA AJAJA.

[Plate LXIII.—Fig. 1.]

Arct. Zool. No. 338.—LATH. *Syn. v. 3, p. 16, No. 2.*—*La Spatule couleur de Rose, BRISS. Orn. V, p. 356, 2. pl. 30.*—*Pl. Enl. p. 116.*—BUFF. VII, 456.—PEALE'S *Museum, No. 3553.*

THIS stately and elegant bird inhabits the sea shores of America from Brasil to Georgia. It also appears to wander up the Mississippi sometimes in summer, the specimen from which the figure in the plate was drawn having been sent me from the neighbourhood of Natchez, in excellent order; for which favour I am indebted to the family of my late benevolent and scientific friend William Dunbar, esq. of that territory. It is now deposited in Mr. Peale's museum.

This species, however, is rarely seen to the northward of the Alatomaha river; and even along the peninsula of Florida is a scarce bird. In Jamaica, several other of the West India islands, Mexico and Guiana, it is more common, but confines itself chiefly to the sea shore and the mouths of rivers. Captain Henderson says, it is frequently seen at Honduras. It wades about in quest of shell fish, marine insects, small crabs and fish. In pursuit of these it occasionally swims and dives.

There are few facts on record relative to this very singular bird. It is said that the young are of a blackish chesnut the first year; of the roseate color of the present the second year; and of a deep scarlet the third.*

Having never been so fortunate as to meet with them in their native wilds, I regret my present inability to throw any farther

* Latham.

light on their history and manners. These, it is probable, may resemble in many respects those of the European species, the *White Spoonbill*, once so common in Holland.* To atone for this deficiency, I have endeavoured faithfully to delineate the figure of this American species, and may perhaps resume the subject in some future part of the present work.

The Roseate Spoonbill, now before us, measured two feet six inches in length, and near four feet in extent; the bill was six inches and a half long from the corner of the mouth, seven from its upper base, two inches over at its greatest width, and three quarters of an inch where narrowest; of a black color for half its length, and covered with hard scaly protuberances, like the edges of oyster shells; these are of a whitish tint, stained with red; the nostrils are oblong, and placed in the center of the upper mandible; from the lower end of each there runs a deep groove along each side of the mandible, and about a quarter of an inch from its edge; whole crown and chin bare of plumage and covered with a greenish skin; that below the under mandible dilatable like those of the genus *Pelicanus*; space round the eye orange; irides blood red; cheeks and hind head a bare black skin; neck long, covered with short white feathers, some of which on the upper part of the neck are tipped with crimson; breast white, the sides of which are tinged with a brown burnt color; from the upper part of the breast proceeds a long tuft of fine hair like plumage, of a pale rose color; back white, slightly tinged with brownish; wings a pale wild rose color, the shafts like; the shoulders of the wings are covered with long hairy plumage of a deep and splendid carmine; upper and lower tail coverts the same rich red; belly rosy; rump paler; tail

* The European species breeds on trees, by the sea side; lays three or four white eggs, powdered with a few pale red spots, and about the size of those of a hen; are very noisy during breeding time; feed on fish, muscles, &c., which, like the Bald Eagle, they frequently take from other birds, frightening them by clattering their bill; they are also said to eat grass, weeds, and roots of reeds: they are migratory; their flesh reported to savour that of a goose; the young are reckoned good food.

equal at the end, consisting of twelve feathers of a bright brownish orange, the shafts reddish; legs and naked part of the thighs dark dirty red; feet half webbed; toes very long, particularly the hind one. The upper part of the neck had the plumage partly worn away, as if occasioned by resting it on the back, in the manner of the Ibis. The skin on the crown is a little wrinkled; the inside of the wing a much richer red than the outer.

AMERICAN AVOSET.

RECURVIROSTRA AMERICANA.

[Plate LXIII.—Fig. 2.]

Arct. Zool. No. 421.—*LATH. Syn. v. 3, p. 295, No. 2.*—*PEALE'S Museum, No. 4250.*

THIS species, from its perpetual clamour and flippancy of tongue, is called by the inhabitants of Cape May, the Lawyer; the comparison, however, reaches no farther; for our Lawyer is simple, timid, and perfectly inoffensive.

In describing the Long-legged Avoset of this volume, the similarity between that and the present was taken notice of. This resemblance extends to every thing but their color. I found both these birds associated together on the salt marshes of New Jersey, on the twentieth of May. They were then breeding. Individuals of the present species were few in respect to the other. They flew around the shallow pools exactly in the manner of the Long-legs, uttering the like sharp note of *click click click*, alighting on the marsh or in the water indiscriminately, fluttering their loose wings, and shaking their half bent legs, as if ready to tumble over, keeping up a continual yelping note. They were, however, rather more shy, and kept at a greater distance. One which I wounded attempted repeatedly to dive; but the water was too shallow to permit him to do this with facility. The nest was built among the thick tufts of grass, at a small distance from one of these pools. It was composed of small twigs of a sea side shrub, dry grass, sea weed, &c., raised to the height of several inches. The eggs were four, of a dull olive color, marked with large irregular blotches of black, and with others of a fainter tint.

This species arrives on the coast of Cape May late in April; rears its young, and departs again to the south early in October. While here it almost constantly frequents the shallow pools in the salt marshes; wading about, often to the belly, in search of food, *viz.* marine worms, snails, and various insects that abound among the soft muddy bottoms of the pools.

The male of this species is eighteen inches and a half long, and two feet and a half in extent; the bill is black, four inches in length, flat above, the general curvature upwards, except at the extremity, where it bends slightly down, ending in an extremely fine point; irides reddish hazel; whole head, neck and breast a light sorrel color; round the eye and on the chin nearly white; upper part of the back and wings black; scapulars and almost the whole back white, tho generally concealed by the black of the upper parts; belly, vent and thighs pure white; tail equal at the end, white, very slightly tinged with cinereous; tertials dusky brown; greater coverts tipped with white; secondaries white on their outer edges, and whole inner vanes; rest of the wing deep black; naked part of the thighs two and a half inches; legs four inches, both of a very pale light blue, exactly formed thinned and netted like those of the Long-legs; feet half webbed; the outer membrane somewhat the broadest; there is a very slight hind toe, which, claw and all, does not exceed a quarter of an inch in length. In these two latter circumstances alone it differs from the Long-legs; but is in every other strikingly alike.

The female was two inches shorter, and three less in extent; the head and neck a much paler rufous, fading almost to white on the breast; and separated from the black of the back by a broader band of white; the bill was three inches and a half long; the leg half an inch shorter; in every other respect marked as the male. She contained a great number of eggs, some of them nearly ready for exclusion. The stomach was filled with small snails, periwinkle shell fish, some kind of mossy vegetable food, and a number of

aquatic insects. The intestines were infested with tape worms, and a number of smaller bot-like worms, some of which wallowed in the cavity of the abdomen.

In Mr. Peale's collection there is one of this same species, said to have been brought from New Holland, differing little in the markings of its plumage from our own. The red brown on the neck does not descend so far, scarcely occupying any of the breast; it is also somewhat less.

In every stuffed and dried specimen of these birds which I have examined, the true form and flexure of the bill is altogether deranged; being naturally of a very tender and delicate substance.

RUDDY PLOVER.

CHARADRIUS RUBIDUS.

[Plate LXIII.—Fig. 3.]

Arct. Zool. No. 404.—LATH. *Syn. v. 3, p. 195, No. 2.*—TURT. *Syst. p. 445.*

THIS bird is frequently found in company with the Sanderling, which, except in color, it very much resembles. It is generally seen on the sea coast of New Jersey in May and October, on its way to and from its breeding place in the north. It runs with great activity along the edge of the flowing or retreating waves on the sands, picking up the small bivalve shell fish, which supplies so many multitudes of the Plover and Sandpiper tribes.

I should not be surprised if the present species turn out hereafter to be the Sanderling itself, in a different dress. Of many scores which I examined scarce two were alike; in some the plumage of the back was almost plain; in others the black plumage was just shooting out. This was in the month of October. Naturalists, however, have considered it as a separate species; but have given us no further particulars than that "in Hudson's Bay it is known by the name of Mistchaychekiskaweshish"* a piece of information certainly very instructive.

The Ruddy Plover is eight inches long, and fifteen in extent; the bill is black, an inch long and straight; sides of the neck and whole upper parts speckled largely with white, black and ferruginous; the feathers being centered with black, tipped with white and edged with ferruginous, giving the bird a very motley appearance;

* Latham.

belly and vent pure white; wing quills black, crossed with a band of white; lesser coverts whitish, centered with pale olive, the first two or three rows black; two middle tail feathers black; the rest pale cinereous, edged with white; legs and feet black; toes bordered with a very narrow membrane. On dissection both males and females varied in their colors and markings.

SEMIPALMATED SANDPIPER.

TRINGA SEMIPALMATA.

[Plate LXIII.—Fig. 4.]

PEALE'S *Museum*, No. 4023.

THIS is one of the smallest of its tribe; and seems to have been entirely overlooked, or confounded with another which it much resembles (*Tringa pusilla*), and with whom it is often found associated.

Its half-webbed feet, however, are sufficient marks of distinction between the two. It arrives and departs with the preceding species; flies in flocks with the Stints, Purres, and a few others; and is sometimes seen at a considerable distance from the sea, on the sandy shores of our fresh water lakes. On the twenty-third of September I met with a small flock of these birds in Burlington bay, on lake Champlain. They are numerous along the sea shores of New Jersey; but retire to the south on the approach of cold weather.

This species is six inches long, and twelve in extent; the bill is black, an inch long, and very slightly bent; crown and body above dusky brown, the plumage edged with ferruginous and tipped with white; tail and wings nearly of a length; sides of the rump white; rump and tail coverts black; wing quills dusky black, shafted and banded with white, much in the manner of the Least Snipe; over the eye a line of white; lesser coverts tipped with white; legs and feet blackish ash, the latter half webbed. Males and females alike in color.

These birds varied greatly in their size, some being scarcely five inches and a half in length, and the bill not more than three

quarters; others measured nearly seven inches in the whole length, and the bill upwards of an inch. In their general appearance they greatly resemble the Stints or Least Snipe; but unless we allow that the same species may sometimes have the toes half webbed, and sometimes divided to the origin, and this not in one or two solitary instances, but in whole flocks, which would be extraordinary indeed, we cannot avoid classing this as a new and distinct species.

END OF THE SEVENTH VOLUME.





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